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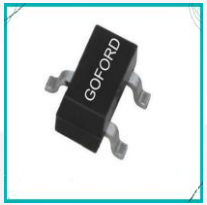
How to Choose the Alternatives

Packages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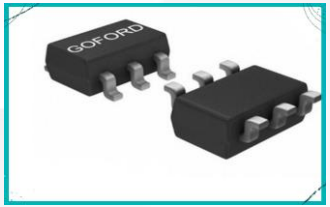
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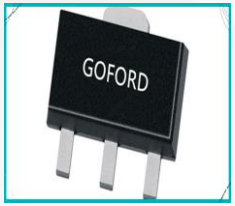
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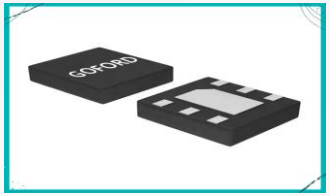
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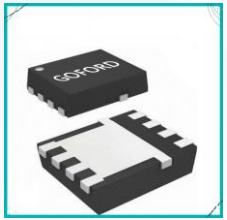
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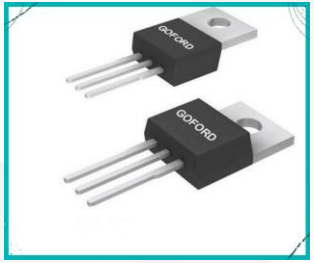
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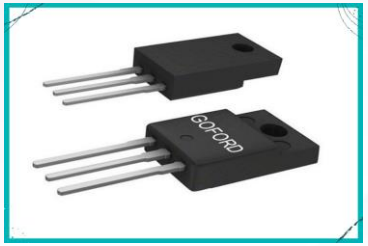
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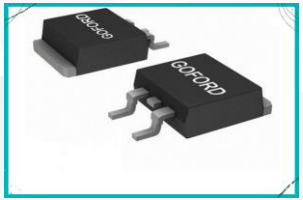
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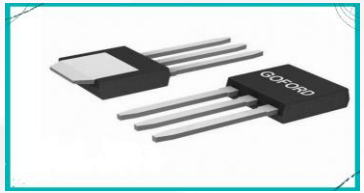
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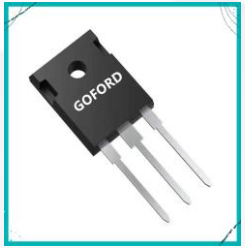

GOFORD

How to Find Cross Reference

GOFORD

Product Name	Package	Configuration	ESD	VDS(min)	Id at 25°C(max)	PD(max)	Vgs(th)typ(V)	$R_{DS(on)}$(typ) (@10V)	$R_{DS(on)}$(typ) (@4.5V)	Qg(nC)	Ciss	Crss
45P40	TO-252	P channel	NO	-40V	-45A	80W	-1.5V	10.5mΩ		42	3191	262
FDD6637	TO-252	P channel	NO	-35v	-55A	57w	-1.5V	11.6		45	2370	250
MDD3752RH	TO-252	P channel	NO	-40V	'-43A	50w	-1.5V	17	25	44	2088	168

Competitor PN	GOFORD PNs	Alternative	Package	Same	Futher compare other parameters based on custoemr's application requirements	Vgs(th	Sample Testing	if failed, consult our FAE to find the solution
			Configuration	Same		PD		
			VDS	Same		Qg		if passed, start trial order and mass purchase
			ID	Near or slightly higher		Ciss		
			RDS(on)	Near or slightly lower		Others		

How to Find Cross Reference

International
IOR Rectifier

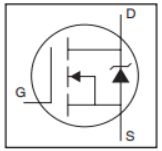
PD - 96224

IRLR3636PbF
IRLU3636PbF

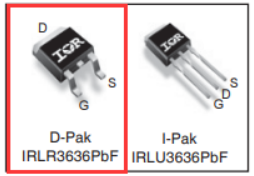
HEXFET® Power MOSFET

Applications
- DC Motor Drive
- High Efficiency Synchronous Rectification in SMPS
- Uninterruptible Power Supply
- High Speed Power Switching
- Hard Switched and High Frequency Circuits

Benefits
- Optimized for Logic Level Drive
- Very Low $R_{DS(ON)}$ at 4.5V V_{GS}
- Superior R*Q at 4.5V V_{GS}
- Improved Gate, Avalanche and Dynamic dV/dt Ruggedness
- Fully Characterized Capacitance and Avalanche SOA
- Enhanced body diode dV/dt and dI/dt Capability
- Lead-Free



V_{DSS}		60V
$R_{DS(on)}$	typ.	5.4mΩ
	max.	6.8mΩ
I_D (Silicon Limited)		99A①
I_D (Package Limited)		50A



G	D	S
Gate	Drain	Source

GOFORD **G110N06K**

N-Channel Enhancement Mode Power MOSFET

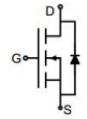
Description

The G110N06K uses advanced trench technology to provide excellent $R_{DS(ON)}$, low gate charge. It can be used in a wide variety of applications.

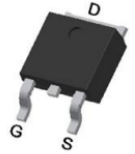
General Features

- V_{DS} 60V
- I_D (at V_{GS} = 10V) 110A
- $R_{DS(ON)}$ (at V_{GS} = 10V) < 6.4mΩ
- $R_{DS(ON)}$ (at V_{GS} = 4.5V) < 8.4mΩ
- 100% Avalanche Tested
- RoHS Compliant

Application
- Power switch
- DC/DC converters



Schematic diagram



TO-252

1. Refer to “Same VDS value”: to choose the closest one if no same; And it’s better with no big difference.
e.g. Infineon IRLR3636TRPBF 60V--GOFORD G110N06K 60V

How to Find Cross Reference

GOFORD

DIODES INCORPORATED

Lead-free Green

DMG4800LSD

DUAL N-CHANNEL ENHANCEMENT MODE MOSFET

Product Summary

BV_{DSS}	$R_{DS(ON)}$ Max	I_D Max T_A = +25°C
30V	16mΩ @ V_{GS} = 10V	9.8A
	22mΩ @ V_{GS} = 4.5V	8.4A

Description

This MOSFET has been designed to minimize the on-state resistance ($R_{DS(ON)}$) yet maintain superior switching performance, making it ideal for high efficiency power management applications.

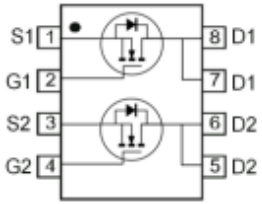
Features and Benefits

- 100% Avalanche Rated Part
- Low $R_{DS(ON)}$ – Minimizes Conduction Losses
- Low Q_g – Minimizes Switching Losses
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **For automotive applications requiring specific change control (i.e.: parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please refer to the related automotive grade (Q-suffix) part. A listing can be found at https://www.diodes.com/products/automotive/automotive-products/.**

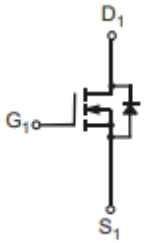
SO-8

Top View

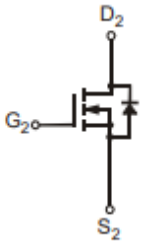
Top View



Pin Configuration
Internal Schematic



N-Channel MOSFET



N-Channel MOSFET

Trench Mosfet

Product Name	Package	Configuration	ESD	VDS(max)	Id at 25℃ (max)	PD(max)
	SOP-8 DUAL	N+N chai	NO	100V 20V 40V 60V	5A 6A 8A 9A	1.25W 2.5W 2.6W 3.1W
	Reset	Reset	Reset	Reset	Reset	Reset
9926	SOP-8 DUAL	N+N channel	NO	20V	6A	1.25W
G160N04S2	SOP-8 DUAL	N+N channel	NO	40V	9A	2.5W
G05N06S2	SOP-8 DUAL	N+N channel	NO	60V	5A	3.1W
G09N06S2	SOP-8 DUAL	N+N channel	NO	60V	9A	2.6W
G130N06S2	SOP-8 DUAL	N+N channel	NO	60V	9A	2.6W
G1008B	SOP-8 DUAL	N+N channel	NO	100V	8A	3W

No Dual N-CH here in 30V!
But G160N04S2, the PN in 40V, can be recommended for test.

How to Find Cross Reference

GOFORD

DIODES INCORPORATED

NOT RECOMMENDED FOR NEW DESIGN
USE DMN2058U

Lead-free Green

DMG3420U

N-CHANNEL ENHANCEMENT MODE MOSFET

Product Summary

BV_{DSS}	$R_{DS(ON)}$ Max	I_D Max T_A = +25°C
20V	29mΩ @ V_{GS} = 10V	6.5A
	35mΩ @ V_{GS} = 4.5V	5.2A

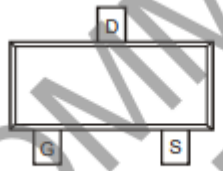
Features

- Low On-Resistance
- Low Input Capacitance
- Fast Switching Speed
- Low Input/Output Leakage
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

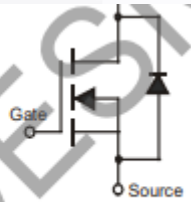
Description

SOT23

Top View



Top View



Equivalent Circuit

GOFORD

2302

N-Channel Enhancement Mode Power MOSFET

Description

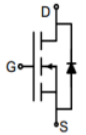
The 2302 uses advanced trench technology to provide excellent $R_{DS(ON)}$, low gate charge. It can be used in a wide variety of applications.

General Features

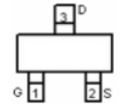
- V_{DS} 20V
- I_D (at V_{GS} = 10V) 4.3A
- $R_{DS(ON)}$ (at V_{GS} = 4.5V) < 27mΩ
- $R_{DS(ON)}$ (at V_{GS} = 2.5V) < 44mΩ
- 100% Avalanche Tested
- RoHS Compliant

Application

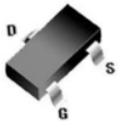
- Power switch
- DC/DC converters



Schematic diagram



Marking and pin assignment



SOT-23

Gate-Source Voltage			V_{GSS}	±12	V
Continuous Drain Current (Note 5)	Steady State	T_A = +25°C T_A = +85°C	I_D	5.47 3.43	A

Competitor PN DMG3420U & GOFORD 2302: same package, same vds, close ID, close RDS(ON) ;

How to Find Cross Reference

GOFORD

Product Name	Package	Configuration	ESD	VDS(max)	Id at 25℃ (max)	PD(max)	Vgs(th)typ(V)	$R_{DS(on)}$(typ) (@10V)	$R_{DS(on)}$(typ) (@4.5V)	Qg(nC)	Ciss	Crss
	SOT-23	N Channe	NO	20V	4.3A 5.2A 5A 6A	1.25W 1W	0.65V 0.7 V 0.7V	12mΩ 22	13mΩ 20mΩ~2 21mΩ 28mΩ	11 4	356 630 780	60 70 80
	Reset	Reset	Reset	Reset	Reset	Reset	Reset	Reset	Reset	Reset	Reset	Reset
2302	SOT-23	N Channel	NO	20V	4.3A	1W	0.7V		21mΩ	4	356	70
G2312	SOT-23	N Channel	NO	20V	5A	1.25W	0.7 V	12mΩ	13mΩ	11	780	80
A2T	SOT-23	N channel	NO	20V	5.2A	1.25W	0.7V	22	28mΩ	11	630	60
2300F	SOT-23	N channel	NO	20V	6A	1.25W	0.65V		20mΩ~27mΩ	11	630	60

Product Name	Package	Configuration	ESD	VDS(max)	Id at 25℃(max)	PD (max)	Vgs(th)typ(V)	$R_{DS(on)}$(MAX) (@10V)	$R_{DS(on)}$(MAX) (@4.5V)	Qg(nC)	Ciss	Crss
DMG3420U-7	SOT23	N-channel		20V	5.47A	0.74W	0.95V	29mΩ	35mΩ	5.4	434.7	61.2
2300F	SOT-23	N channel	NO	20V	6.0A	1.25W	0.65V		27mΩ	11	630	60

How to Find Cross Reference

GOFORD

Product Name	Package	Configuration	ESD	VDS(max)	Id at 25℃(max)	PD(max)	Vgs(th)typ(V)	$R_{DS(on)}$(@10V)	$R_{DS(on)}$(@4.5V)	Qg(nC)	Ciss	Crss
FQB50N06TM	D2PAK	N channel	NO	60V	50A	120W	2V-4V	22mΩ		31	1540	65
G130N06M	TO-263	N channel	NO	60V	90A	85W	1.7V	12mΩ	14mΩ	36.6	2867	147
PSMN012-80BS,118	D2PAK	N channel	NO	80V	74A	148W	2V-4V	11mΩ		43	2782	162
GT080N10M	TO-263	N channel	NO	100V	70A	100W	1.5V	7.5mΩ	9.5mΩ	35	2125	22
GT030N08M	TO-263	N channel	NO	85V	200A	260W	3.0V	3mΩ		127	6586	99
FDN5618P	SOT-23-3	P channel	NO	-60V	1.25A	0.5W	1V-3V	170mΩ		8.6	430	
G02P06	SOT-23	P channel	NO	-60V	-1.6A	1.5W	-1.8V	190mΩ	230mΩ	11.3	566	23

Change Notes: the higher BV and Id is better, the lower Rdson is better.


GOFORD
THANKS