

Features

- · ESD HBM Class 2
- · Trench LV MOSFET Technology
- · Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

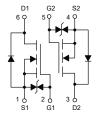
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Thermal Resistance: 432°C/W Junction to Ambient^(Note2)

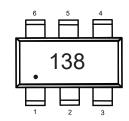
Parameter	Symbol	Rating	Unit		
Drain-Source Voltage		V _{DS}	60	V	
Gate-Source Volltage		V _{GS}	±20	V	
Continuous Drain Current	T _A =25°C		204	mA	
	T _A =100°C	I _D	129		
Pulsed Drain Current ^(Note 3)		I _{DM}	816	mA	
Total Power Dissipation (Note 4)		P _D	289	mW	

Note:

- 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
- 2. The value of $R_{\theta JA}$ is measured with the device mounted on 1in^2 FR-4 board with 2oz. Copper, in a still air environment with T_A =25°C.
- 3. Repetitive rating; pulse width limited by max. junction temperature.
- 4. P_D is based on max. junction temperature, using junction-Ambient thermal resistance.

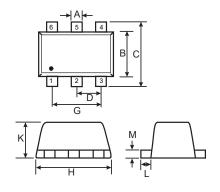
Internal Structure and Marking Code





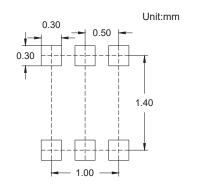
DUAL N-CHANNEL MOSFET

SOT-563



	DIMENSIONS					
DIM	INCHES		MM		NOTE	
DIIVI	MIN	MAX	MIN	MAX	NOTE	
Α	0.006	0.011	0.15	0.30		
В	0.043	0.051	1.10	1.30		
С	0.059	0.067	1.50	1.70		
D	0.020		0.50		TYP.	
G	0.035	0.043	0.90	1.10		
Н	0.059	0.067	1.50	1.70		
K	0.022	0.026	0.55	0.65		
L	0.004	0.011	0.10	0.30		
M	0.004	0.007	0.10	0.18		

Suggested Solder Pad Layout



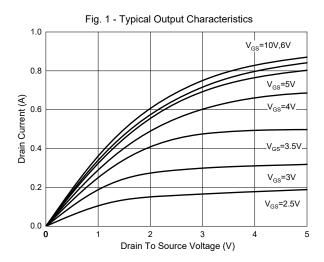


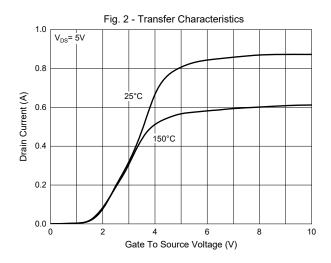
Electrical Characteristics @ 25°C (Unless Otherwise Specified)

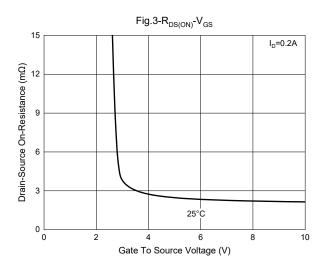
Parameter	Symbol	Test conditions	Min	Тур	Max	Unit	
Static Characteristics							
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =250μA	60			V	
Gate-Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250uA	0.6	1.0	1.4	V	
Gate-Body Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} =0V			±10	μΑ	
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =60V, V _{GS} =0V			1	μA	
		V _{GS} =10V, I _D =0.2A		2.2	3.3	Ω	
Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =4.5V, I _D =0.2A		2.7	4.1		
		V _{GS} =2.5V, I _D =0.05A		4.2	6.3		
Gate Resistance	R _g	f=1MHz, Open Drain		107		Ω	
Diode Characteristics			,		ı	ı	
Continuous Body Diode Current	Is				0.2	Α	
Diode Forward Voltage	V _{SD}	V _{GS} =0V, I _S =0.2A			1.2	V	
Reverse Recovery Time	t _{rr}	I _F =0.3A, dI _F /dt=100A/μs		9.6		ns	
Reverse Recovery Charge	Q _{rr}	- 1 _F -0.3Λ, αι _F /αι-100Λ/μ5		4.0		nC	
Dynamic Characteristics			·		ı		
Input Capacitance	C _{iss}			13.3			
Output Capacitance	C _{oss}	V_{DS} =30V, V_{GS} =0V,f=1MHz		3.6		pF	
Reverse Transfer Capacitance	C _{rss}			1.6			
Total Gate Charge	Q _g			0.8			
Gate-Source Charge	Q _{gs}	V_{DS} =30V, V_{GS} =10V, I_{D} =0.3A		0.2		nC	
Gate-Drain Charge	Q_{gd}			0.1			
Turn-On Delay Time	t _{d(on)}			2.6			
Turn-On Rise Time	t _r	V _{DD} =30V,V _{GS} =10V,		3.2		no	
Turn-Off Delay Time	t _{d(off)}	$R_G=3\Omega,I_D=0.3A$		8.2		ns	
Turn-Off Fall Time	t _f			33.6			

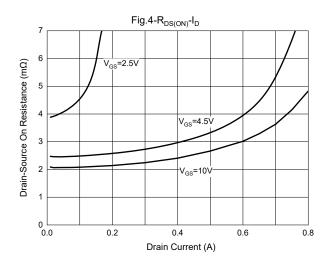


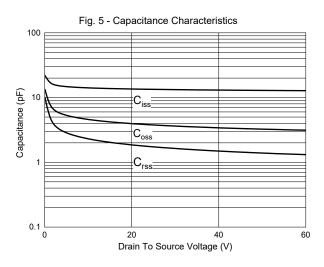
Curve Characteristics

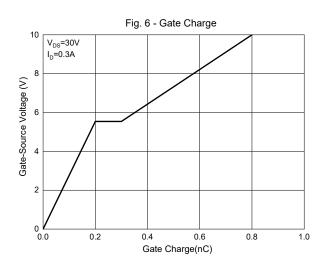






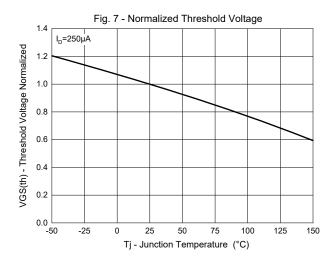


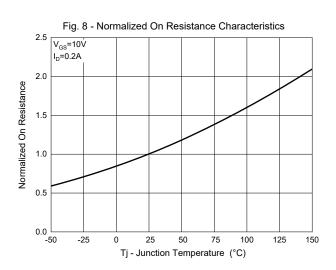


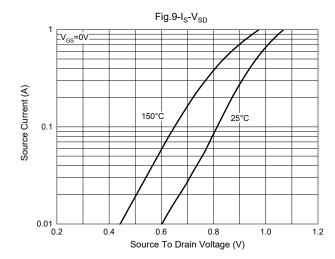


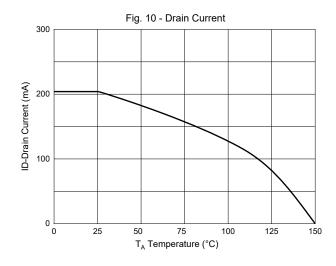


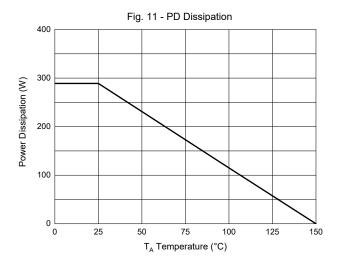
Curve Characteristics













Curve Characteristics

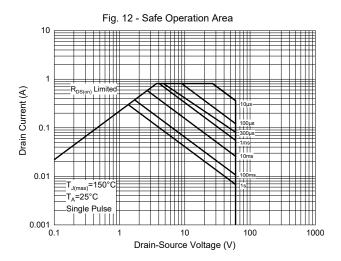
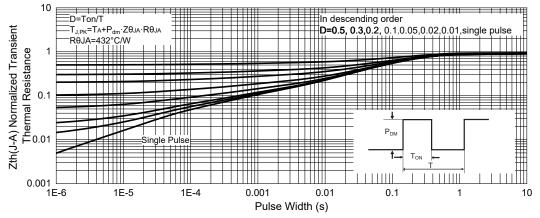


Fig. 13 - Normalized Transient Thermal Impedance





Ordering Information

Device	Packing	
Part Number-TP	Tape&Reel:3Kpcs/Reel	

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