

**Main Product Characteristics:**

**Features and Benefits:**

**Description:**

**Absolute max Rating:**

Symbol	Parameter	Max.	Units
$I_D @ TC = 25^\circ C$	Continuous Drain Current, $V_{GS} @ 10V$	120	A
$I_D @ TC = 100^\circ C$	Continuous Drain Current, $V_{GS} @ 10V$	90	
$I_{DM}$	Pulsed Drain Current	480	
$P_D @ TC = 25^\circ C$	Power Dissipation	100	W
	Linear Derating Factor	0.55	W/ $^\circ C$
$V_{DS}$	Drain-Source Voltage	30	V

### Thermal Resistance

Symbol	Characterizes	Typ.	Max.	Units
R	Junction-to-case		0.9	/W
R	Junction-to-ambient (		62	/W
	Junction-to-Ambient (PCB mounted, steady-state)		40	/W

### Electrical Characterizes @ $T_A=25$ unless otherwise specified

Symbol	Parameter	Min.	Typ.	Max.	Units	Conditions
$V_{(BR)DSS}$	Drain-to-Source breakdown voltage	30			V	$V_{GS} = 0V, I_D$
$R_{DS(on)}$	Static Drain-to-Source on-resistance		2.6	3.6		$V_{GS}=10V, I_D$

## Test circuits and Waveforms

### Notes:

Calculated continuous current based on maximum allowable junction temperature.

Repetitive rating; pulse width limited by max. junction temperature.

The power dissipation PD is based on max. junction temperature, using junction-to-case thermal resistance.

The value of  $R_{JA}$  is measured with the device mounted on 1 in 2 FR-4 board with 2oz.

Copper, in a still air environment with

Typical Electrical Characteristics

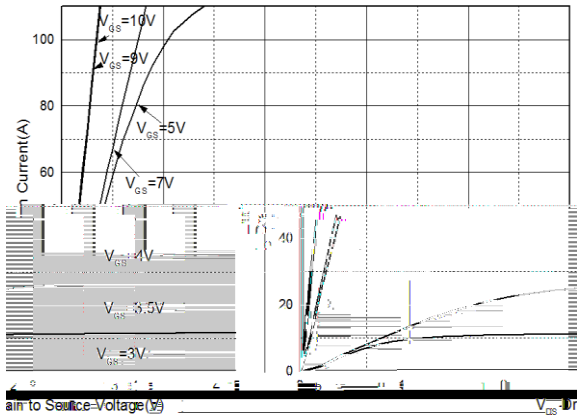


Figure 1. Typical Output Characteristics

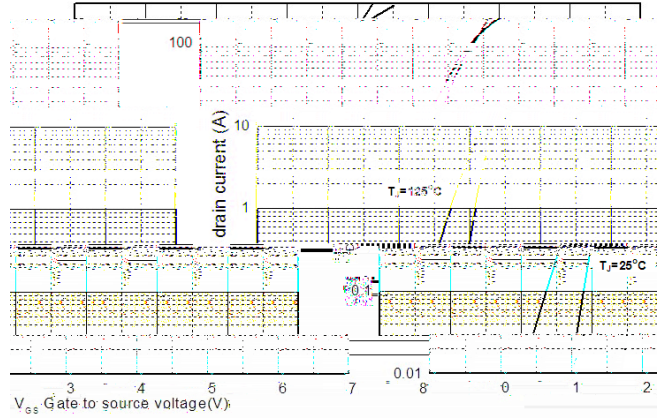


Figure 2. Typical Transfer Characteristics

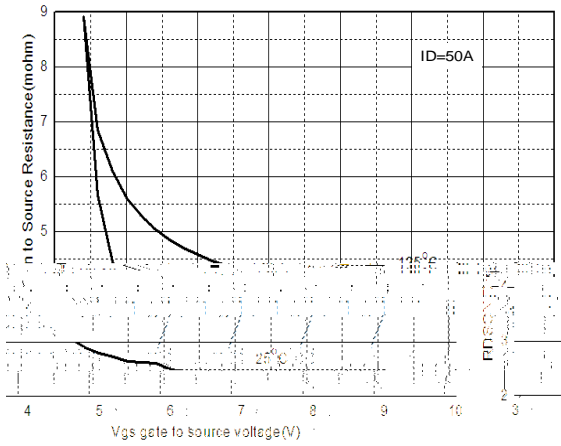


Figure 3. On-Resistance vs. Gate-Source Voltage

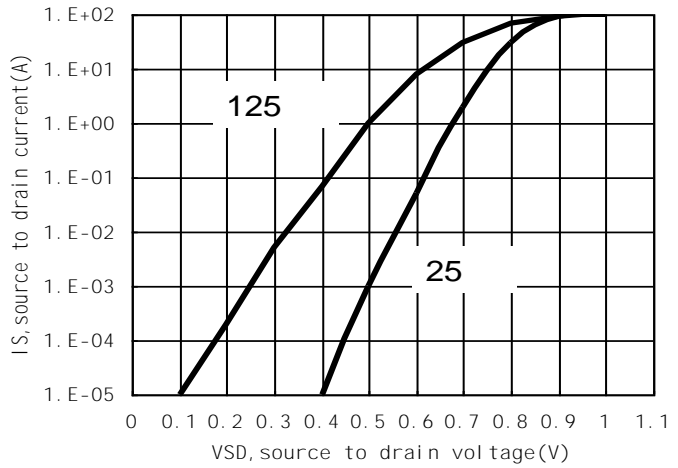


Figure 4. Body-Diode Characteristics

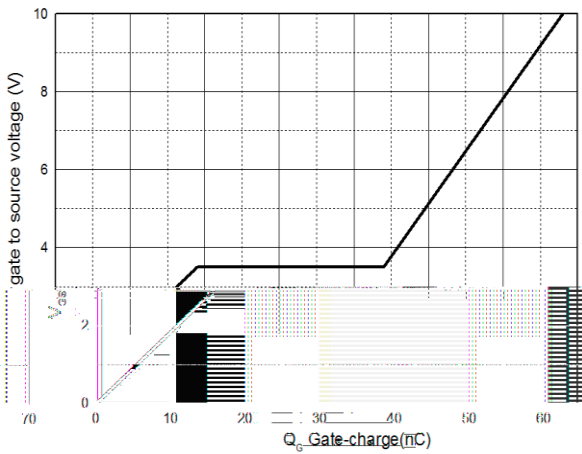


Figure 5. Gate-Charge Characteristics

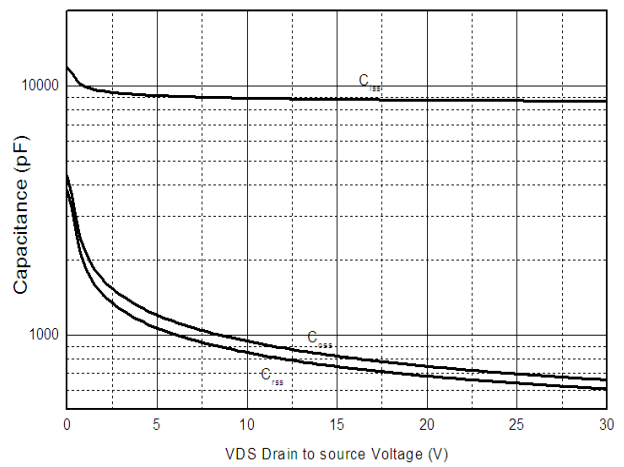


Figure 6. Capacitance Characteristics

Typical thermal characteristics

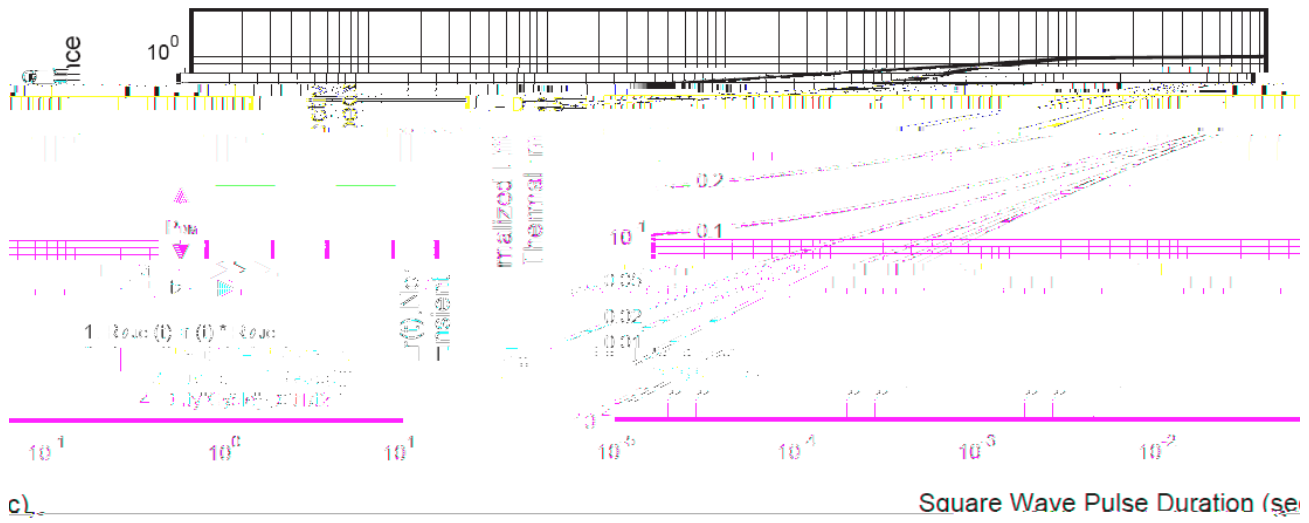
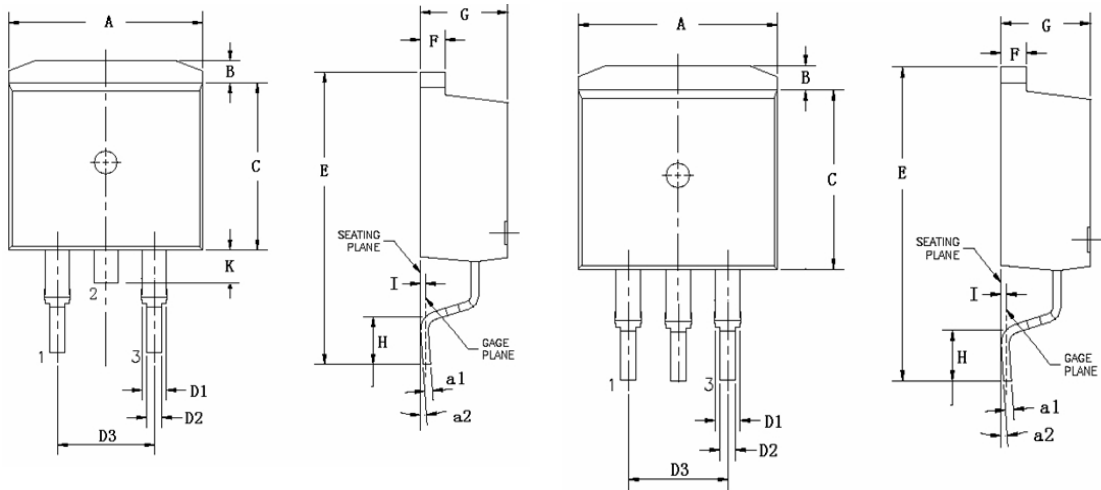


Figure 7. Normalized Thermal Transient Impedance Curve

Mechanical Data



Symbol	Dimension In Millimeters		Dimension In Inches	
	Min	Max	Min	Max
A	9.660	10.280	0.380	0.405
B	1.020	1.320	0.040	0.052
C	8.590	9.400	0.338	0.370
D1	1.140	1.400	0.045	0.055
D2	0.700	0.950	0.028	0.037
D3	5.080 (TYP)		0.200 (TYP)	
E	15.090	15.390	0.594	0.606
F	1.150	1.400	0.045	0.055
G	4.300	4.700	0.169	0.185
H	2.290	2.790	0.090	0.110
I	0.250 (TYP)		0.010 (TYP)	
K	1.300	1.600	0.051	0.063
a1	0.450	0.650	0.018	0.026
a2	0°	8°	1°	8°

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