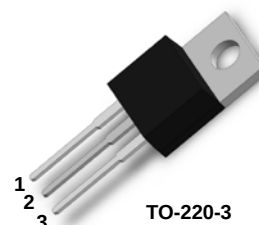
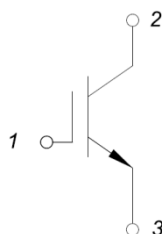


FEATURES

- ☐ High breakdown voltage
- ☐ High speed switching
- ☐ Low drive current



APPLICATIONS

- ☐ High switching power supplies

1.Gate
2.Collector
3.Emitter

Type	V _{CE}	I _C	R _{CE(on)} T _j =25°C	T _{jmax}	Marking	Package
MM2G150K	1500V	2A	7Ω	150°C	MM2G150K	TO-220

ABSOLUTE MAXIMUM RATINGS

T_C=25°C unless otherwise specified

Symbol	Parameter	Test Conditions	Values	Unit
V _{CES}	Collector - Emitter Voltage	T _j =25°C	1500	V
V _{GES}	Gate - Emitter Voltage		± 20	V
I _C	DC Collector Current		2	A
I _{CM}	Pulsed Collector Current	Limited by T _{jmax}	4	A
P _D	Maximum Power Dissipation		50	W
T _{jmax}	Max. Junction Temperature		150	°C
T _{STG}	Storage Temperature Range		-55~150	°C
Weight			2.5	g

THERMAL CHARACTERISTICS

T_C=25°C unless otherwise specified

Symbol	Parameter	Test Conditions	Values	Unit
R _{th(j-c)}	Thermal resistance, Junction to case		2.5	°C/W
R _{th(j-a)}	Thermal resistance, Junction to ambient		50	°C/W

ELECTRICAL CHARACTERISTICS

$T_C=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{(BR)CES}$	Collector-Emitter Breakdown Voltage	$V_{GS}=0V, I_C=250\mu A$	1500			V
$R_{CE(on)}$	Collector-Emitter ON Resistance	$V_{GS}=10V, I_C=1A$		7	10	Ω
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{CE}, I_C=3mA$	2	3	4	V
I_{GES}	Gate Leakage Current	$V_{CE}=0V, V_{GS}=\pm 20V$	-200		200	nA
I_{CES}	Zero Gate Voltage Drain Current	$V_{CE}=1500V, V_{GS}=0V$			500	μA
Q_g	Total Gate Charge	$V_{CC}=600V, I_C=1A, V_{GS}=10V$		60		nC
Q_{ge}	Gate-Emitter Charge			5		nC
Q_{gc}	Gate-Collector Charge			25		nC
g_{fs}	Forward Transconductance	$V_{CE}=20V, I_C=1A$		4		S
C_{ies}	Input Capacitance	$V_{CE}=10V, V_{GS}=0V, f=1MHz$		960		pF
C_{oes}	Output Capacitance			120		pF
C_{res}	Reverse Transfer Capacitance			55		pF
$t_{d(on)}$	Turn - on Delay Time	$V_{CC}=50V, I_C=1A, R_G=5.1\Omega, V_{GS}=10V,$	$T_j=25^{\circ}\text{C}$	25		ns
			$T_j=125^{\circ}\text{C}$	45		ns
t_r	Rise Time		$T_j=25^{\circ}\text{C}$	20		ns
			$T_j=125^{\circ}\text{C}$	30		ns
$t_{d(off)}$	Turn - off Delay Time		$T_j=25^{\circ}\text{C}$	80		ns
			$T_j=125^{\circ}\text{C}$	120		ns
t_f	Fall Time		$T_j=25^{\circ}\text{C}$	40		ns
			$T_j=125^{\circ}\text{C}$	55		ns

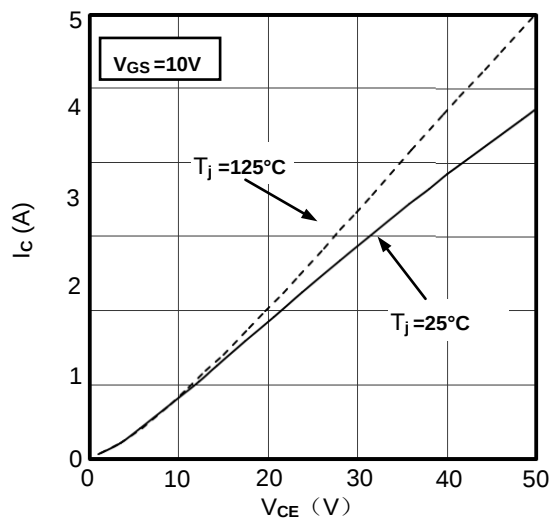


Figure1. Typical Output Characteristics

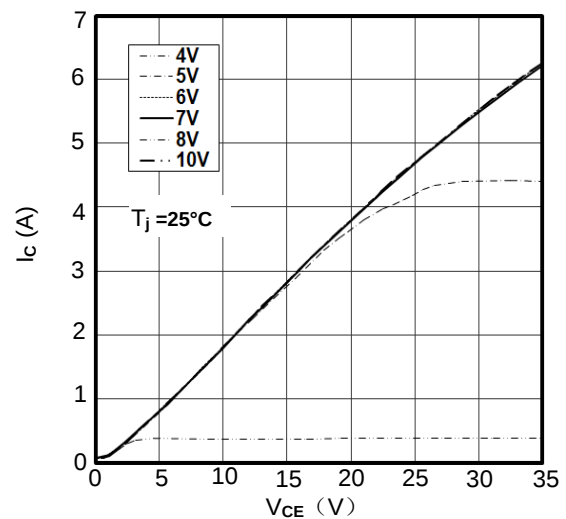


Figure2. Typical Output Characteristics

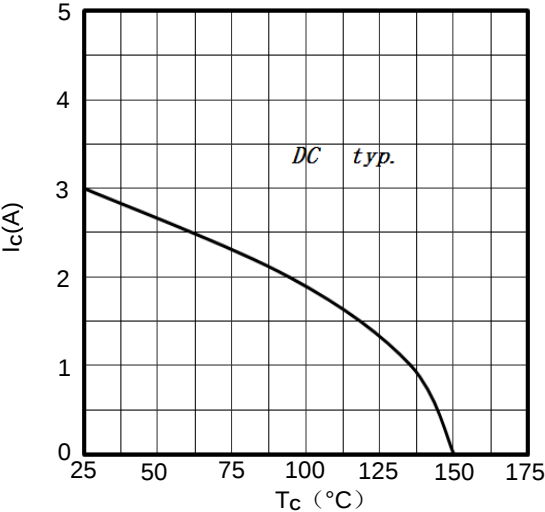


Figure3.Maximum Collector Current vs. T_c

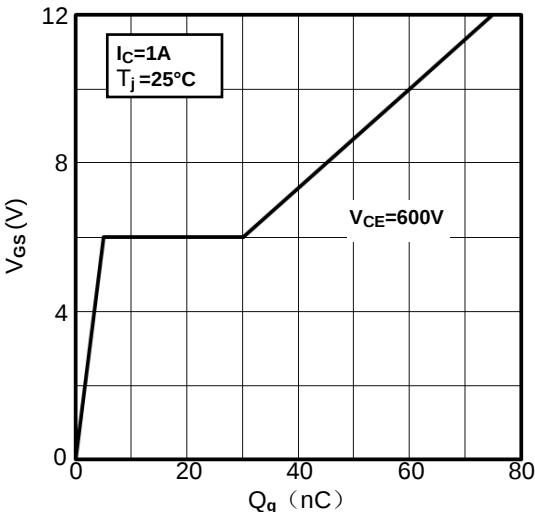


Figure4.Gate Charge characteristics

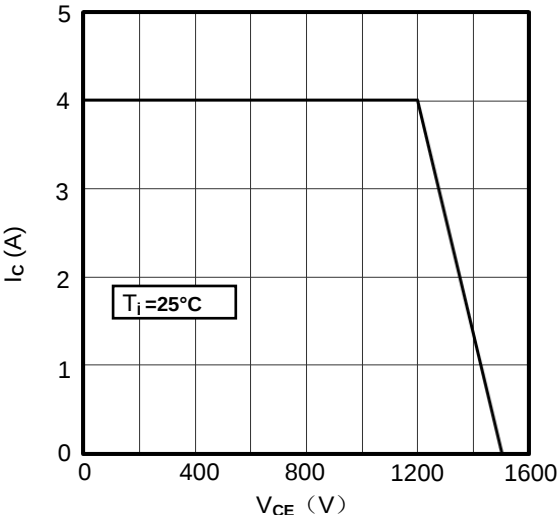


Figure5. Reverse Biased Safe Operating Area

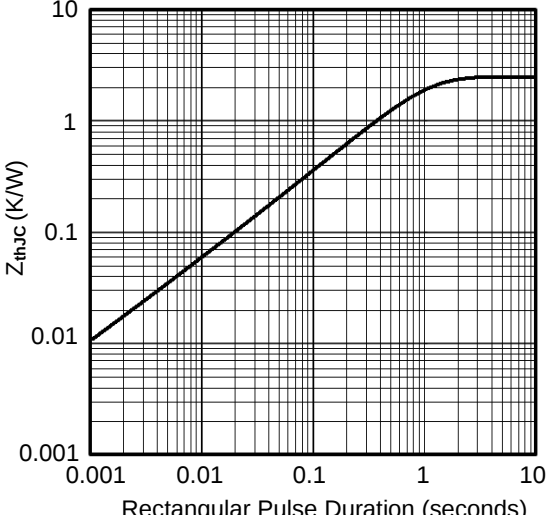


Figure6. Transient Thermal Impedance

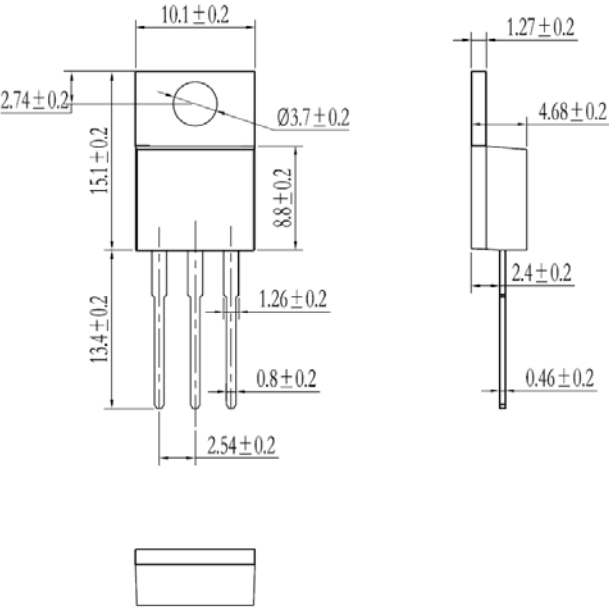


Figure7 Package Outline