JMSH0802MTL

Product Summary

Parameters	Value	Unit
V_{DSS}	80	V
$V_{GS(th)_Typ}$	2.9	V
I_D(@V_{GS}=10V)	285	A
$R_{DS(ON)_Typ}$(@V_{GS}=10V	1.4	mΩ

Ordering Information

Device	Marking	MSL	Form	Package	Reel(pcs)	Per Carton (pcs)
JMSH0802MTL-13	SH0802M	1	Tape&Reel	PowerJE®10x12	2000	10000

Absolute Maximum Ratings (@ T_C = 25°C unless otherwise specified)

Symbol	Parameter		Value	Unit
V_{DS}	Drain-to-Source Voltage		80	V
V_{GS}	Gate-to-Source Voltage		±20	V
I_D	Continuous Drain Current	T_C = 25°C	285	A
		T_C = 100°C	202	
I_{DM}	Pulsed Drain Current [1]		Refer to Fig.4	A
E_{AS}	Single Pulsed Avalanche Energy [2]		1423	mJ
P_D	Power Dissipation	T_C = 25°C	310	W
		T_C = 100°C	124	
T_J, T_{STG}	Junction & Storage Temperature Range		-55 to 150	°C

Thermal Characteristics

Symbol	Parameter	Max	Unit
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient[3]	34	°C/W
$R_{\theta JC}$	Thermal Resistance, Junction to Case	0.4	

Electrical Characteristics (T_J = 25°C unless otherwise specified)

Symbol	Conditions	Min.	Typ.	Max.	Unit
Off Characteristics					
$V_{(BR)DSS}$		80	-	-	V
I_{DSS}		-	-	1.0	μA
I_{GSS}		-	-	±100	nA
$V_{GS(th)}$		2.0	2.9	3.8	V
$R_{DS(ON)}$		-	1.4	2.0	mΩ
R_g		-	0.4	-	Ω
C_{iss}		6243	8740	11799	pF
C_{oss}		1257	1760	2376	pF
C_{rss}		19	26	35	pF
Q_g		91	128	173	nC
Q_{gs}		29	40	54	nC
Q_{gd}		18	26	34	nC
$t_{d(on)}$		-	36	-	ns
t_r		-	38	-	ns
$t_{d(off)}$		-	87	-	ns
t_f					

Typical Performance Characteristics

Figure 1: Power De-rating

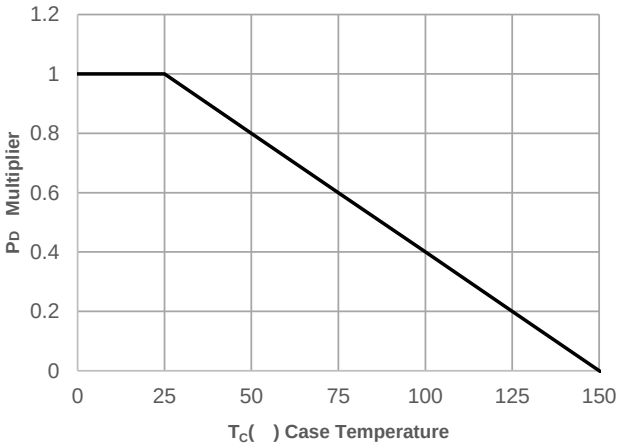
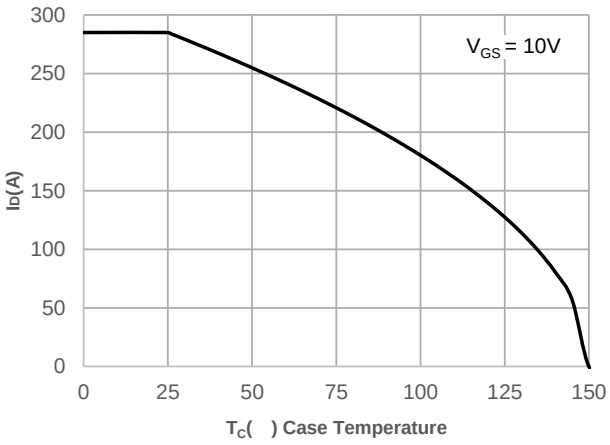
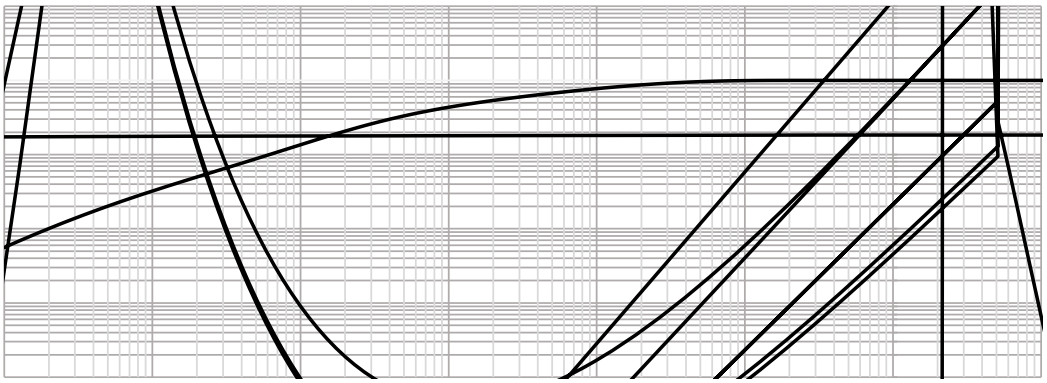


Figure 2: Current De-rating





Typical Performance Characteristics

Figure 5: Output Characteristics

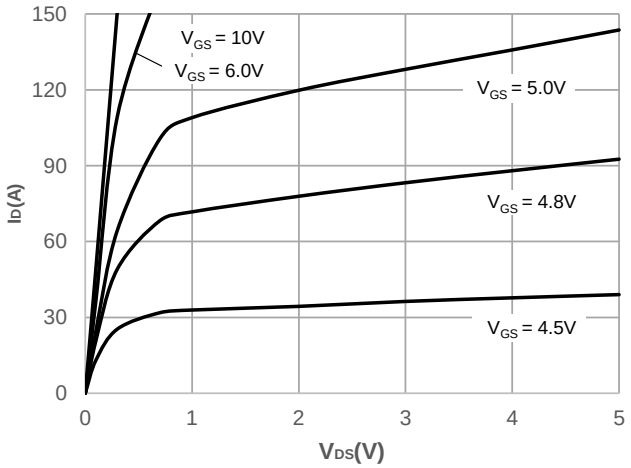
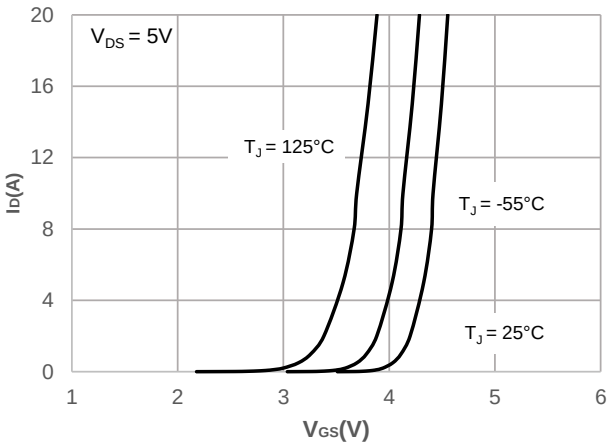
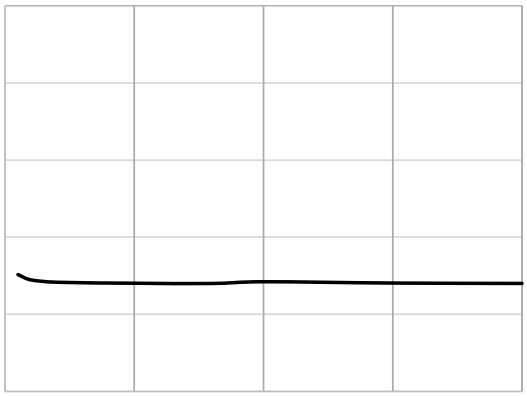


Figure 6: Typical Transfer Characteristics





Test Circuit



Figure 1: Gate Charge Test Circuit & Waveform

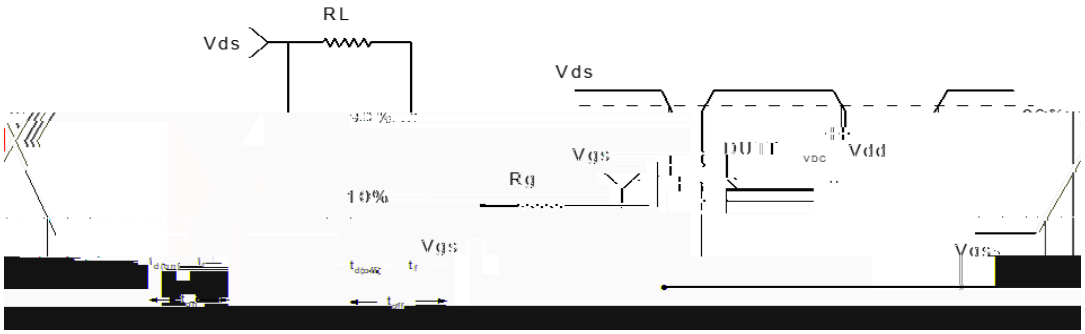


Figure 2: Resistive Switching Test Circuit & Waveform