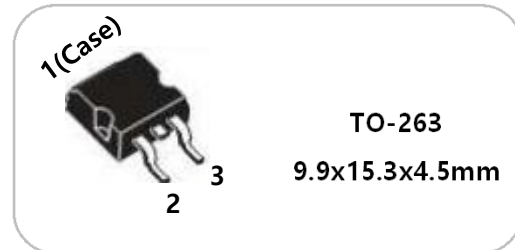


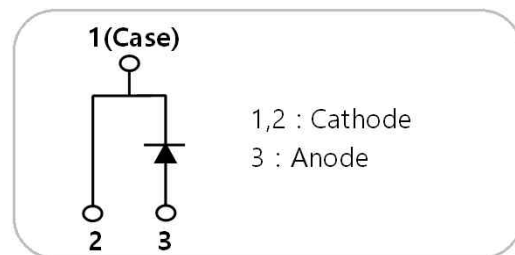

**General description**

Symbol	Value
$V_{BR}$ @ $T_C=25^\circ\text{C}$	Min 1200V
$I_F$ @ $T_C=148^\circ\text{C}$	10A
$Q_C$	Typ 56nC


**Package**


**Features**

- Low forward voltage
- 175°C maximum operating temperature
- Negligible reverse recovery current.
- Fast switching speed



**Applications**

- General purpose
- Switching mode power supply
- Boot diodes in PFC at DC/DC
- Industrial motor drives
- Motor drivers
- Solar inverters


**Maximum ratings ( $T_C = 25^\circ\text{C}$ )**

Parameter	Symbol	Test condition	Value	Unit
Repetitive peak reverse voltage	$V_{RRM}$	-	1200	V
DC peak reverse voltage	$V_R$	-	1200	V
Continuous forward current	$I_F$	$T_C=148^\circ\text{C}$	10	A
Non-repetitive forward surge current	$I_{FSM}$	$t_p=10$ ms, Half sine pulse	40	A
Power dissipation	$P_{tot}$	$T_C=25^\circ\text{C}$	135	W
Operating and storage temperature range	$T_{J, T_{stg}}$	-	-55 to 175	$^\circ\text{C}$

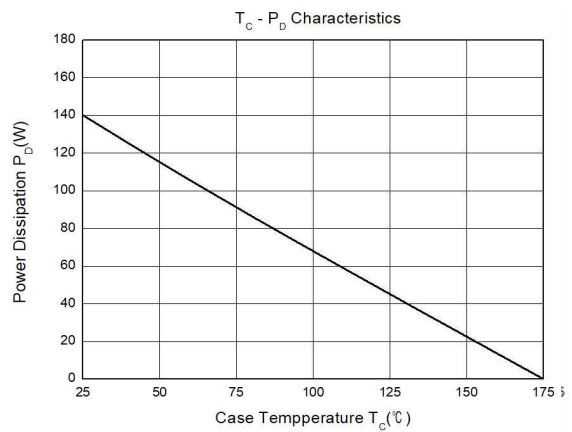
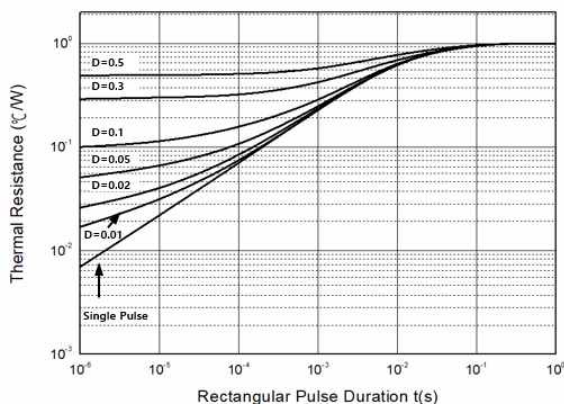


**Electrical characteristics ( $T_C = 25^\circ\text{C}$ )**

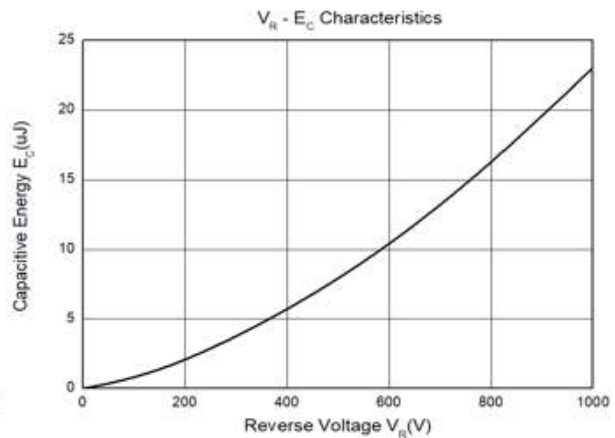
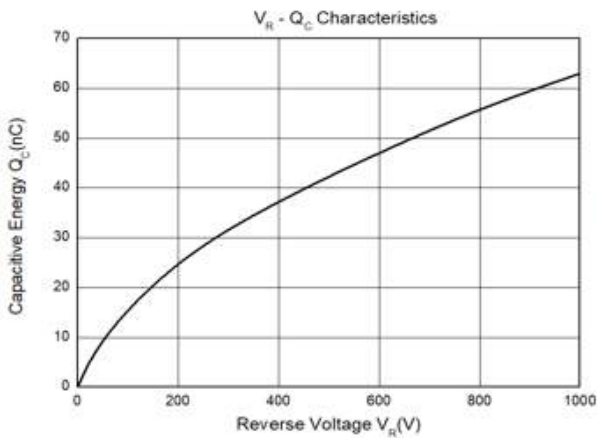
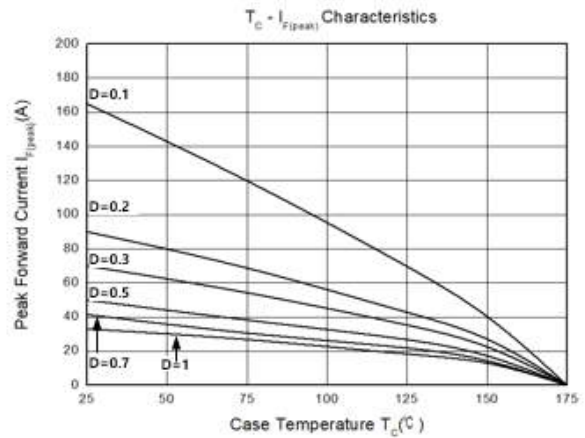
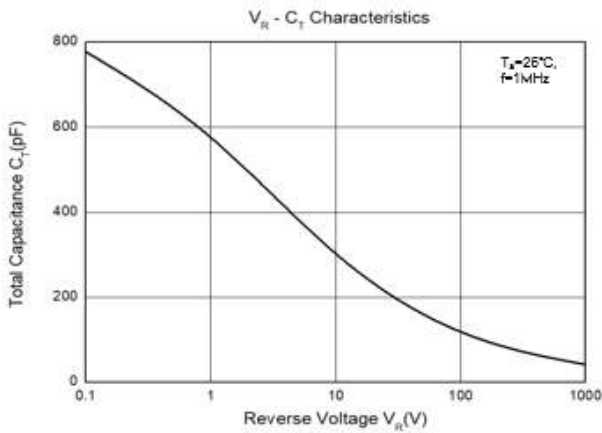
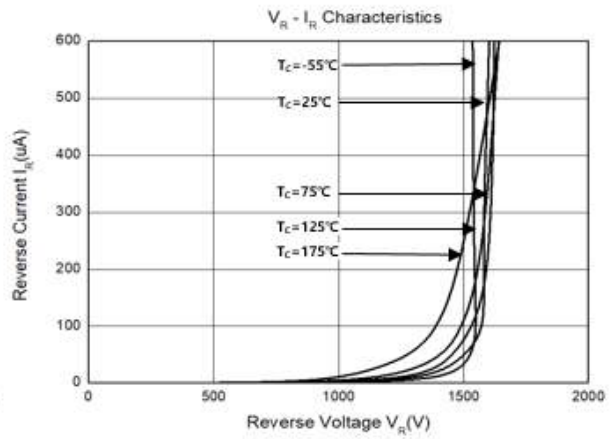
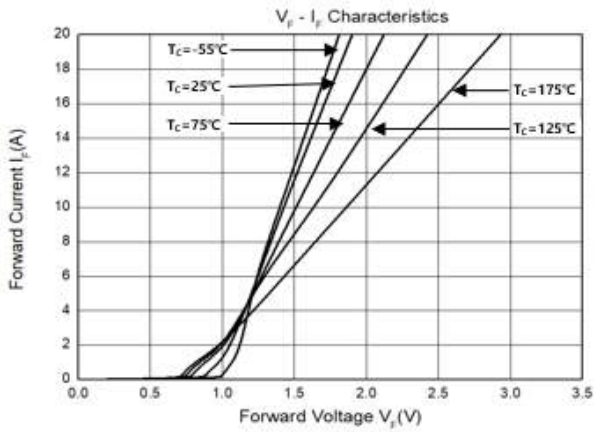
Parameter	Symbol	Test condition	Value			Unit
			Min	Typ	Max	
Forward voltage	$V_F$	$I_F=10\text{A}, T_C=25^\circ\text{C}$	-	1.5	1.8	V
		$I_F=10\text{A}, T_C=175^\circ\text{C}$	-	1.8	-	V
Reverse current	$I_R$	$V_R=1200\text{V}, T_C=25^\circ\text{C}$	-	30	200	$\mu\text{A}$
		$V_R=1200\text{V}, T_C=175^\circ\text{C}$	-	55	-	$\mu\text{A}$
Total capacitive charge	$Q_C$	$I_F=10\text{A}, V_R=800\text{V}, di/dt=200\text{A}/\mu\text{s}$	-	56	-	nC
Total capacitance	C	$V_R=0\text{V}, f=1\text{MHz}$	-	780	-	pF
		$V_R=800\text{V}, f=1\text{MHz}$	-	50	-	pF

**Thermal characteristics ( $T_C = 25^\circ\text{C}$ )**

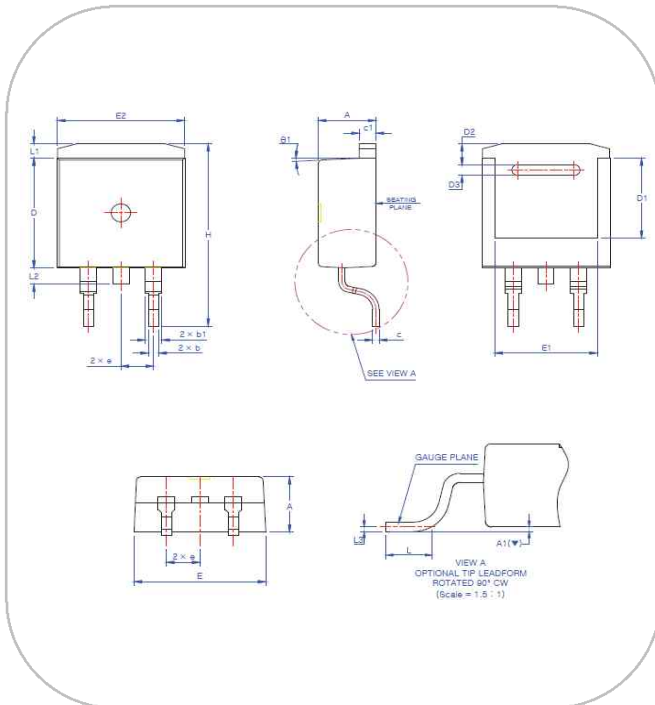
Symbol	Parameter	Max	Unit
$R_{th(j-c)}$	Junction to case	1.1	$^\circ\text{C}/\text{W}$



**Typical electrical characteristics curves ( $T_C = 25^\circ\text{C}$ )**



**Package dimensions(TO-263)**



Symbol	Min	Nom	Max
A	4.30	4.50	4.70
A1(▼)	0.00	-	0.25
b	0.70	0.80	0.90
b1	1.17	1.27	1.37
c	0.45	0.50	0.60
c1	1.25	1.30	1.40
D	9.00	9.20	9.40
D1	6.50	6.70	6.90
D2	1.65	1.75	1.85
D3	0.80	0.90	1.00
E	9.80	10.00	10.20
E1	7.80	8.00	8.20
E2	9.70	9.90	10.10
e	2.54 BSC		
H	15.00	15.30	15.60
L	2.00	2.30	2.60
L1	1.00	1.20	1.40
L2	1.20	1.40	1.60
L3	0.254 BSC		
θ1	(3°)		

**Marking information**

