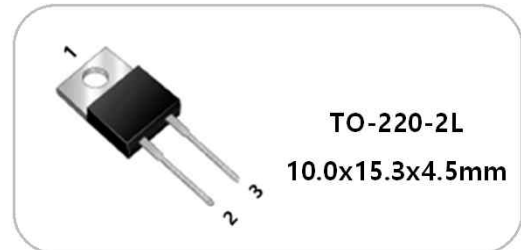


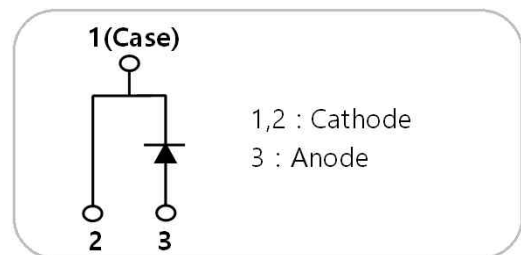

General description

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}	$T_C=25^\circ\text{C}$	150	W
Operating and storage temperature range	$T_{j, T_{stg}}$	-	-55 to 175	$^\circ\text{C}$

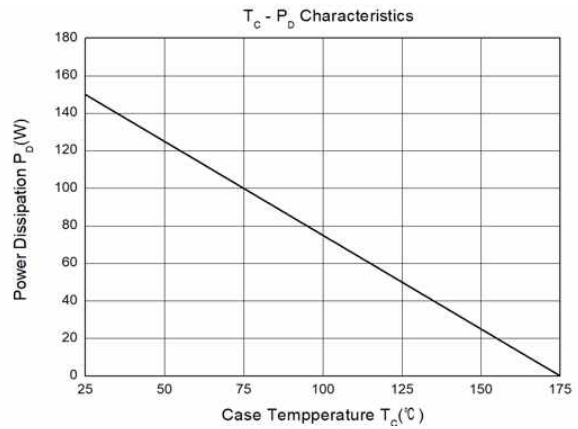
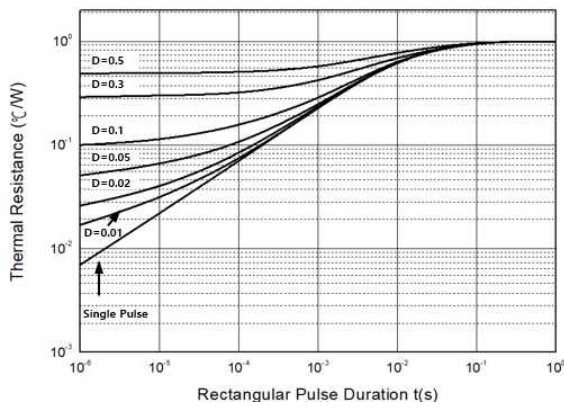


Electrical characteristics ($T_C = 25^\circ\text{C}$)

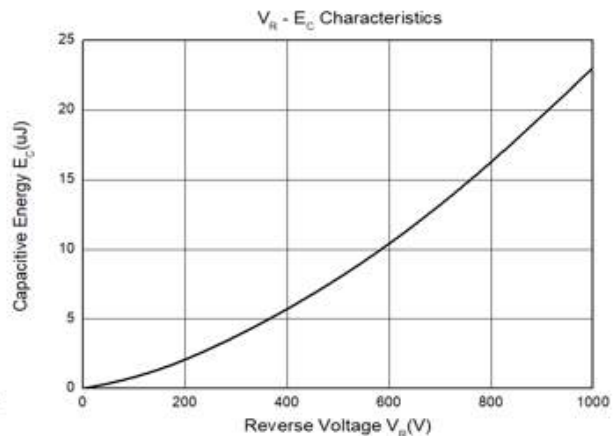
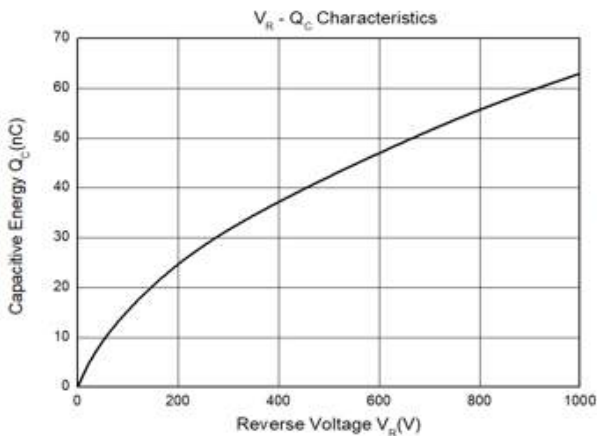
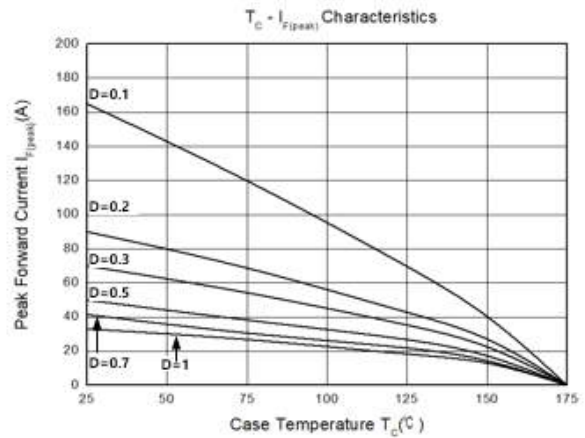
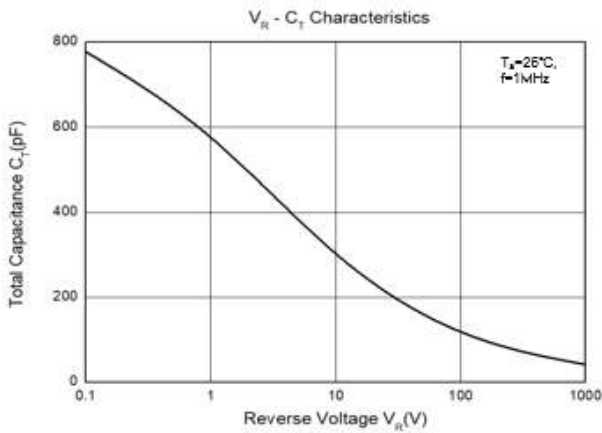
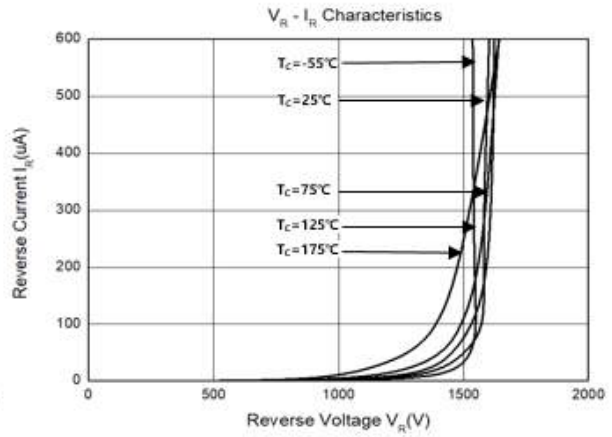
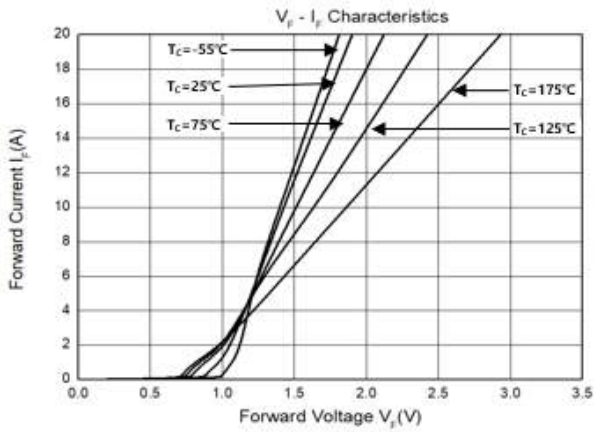
Parameter	Symbol	Test condition	Value			Unit
			Min	Typ	Max	
Forward voltage	V_F	$I_F=10\text{A}, T_C=25^\circ\text{C}$	-	1.5	1.8	V
		$I_F=10\text{A}, T_C=175^\circ\text{C}$	-	1.8	-	V
Reverse current	I_R	$V_R=1200\text{V}, T_C=25^\circ\text{C}$	-	30	200	μA
		$V_R=1200\text{V}, T_C=175^\circ\text{C}$	-	55	-	μA
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 ($T_C = 25^\circ\text{C}$)

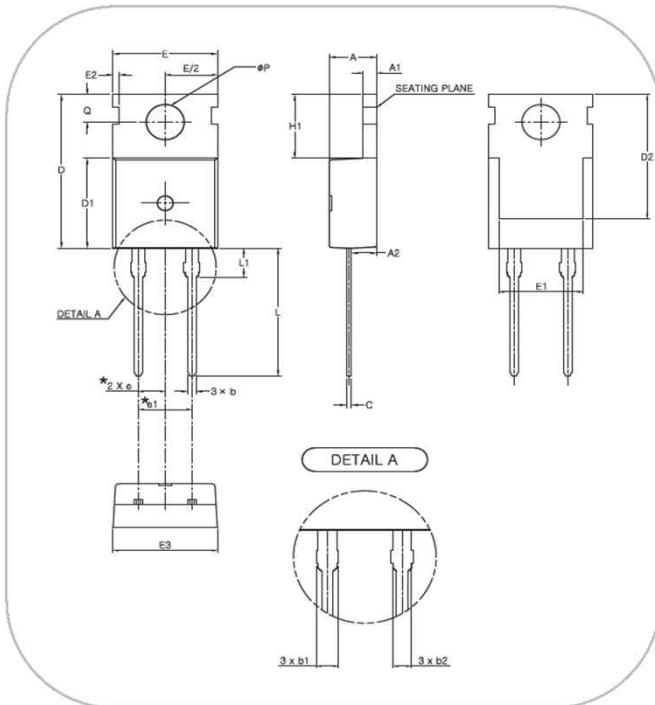
Symbol	Parameter	Max	Unit
$R_{th(j-c)}$	Junction to case	1.0	$^\circ\text{C}/\text{W}$



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



Package dimensions(TO-220-2L)



Symbol	Min	Nom	Max
A	4.30	4.50	4.70
A1	1.25	1.30	1.40
A2	2.20	2.40	2.60
b	0.70	0.80	0.90
b1	1.42	1.52	1.62
b2	1.17	1.27	1.37
c	0.45	0.50	0.60
D	15.50	15.70	15.90
D1	9.00	9.20	9.40
D2	(12.70)		
E	9.70	9.90	10.10
E1	(8.00)		
E2	(0.60)		
E3	9.70	9.90	10.10
e	2.54 BSC		
e1	5.08 BSC		
H1	6.30	6.50	6.70
L	12.88	13.08	13.28
L1	(3.00)		
ØP	3.50	3.60	3.70
Q	2.70	2.80	2.90

Marking information

