



**» Absolute Maximum Ratings (Tc=25°C unless otherwise noted)**

Parameter	Symbol	Ratings	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	650	V
Surge Peak Reverse Voltage	$V_{RSM}$	650	V
DC Peak Blocking Voltage	$V_R$	650	V
Continuous Forward Current Tc=150°C	$I_F$	4	A
Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	35	A
Power Dissipation	$P_D$	37.5	W
Junction Temperature	$T_j$	175	°C
Storage Temperature	$T_{stg}$	-55-175	°C

**» Thermal Characteristics**

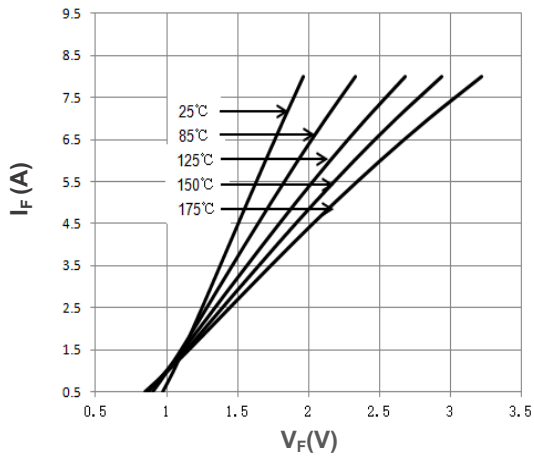
Parameter	Symbol	Max	Unit
Maximum Junction-to-Case	$R_{\theta JC}$	4	°C/W
Maximum Junction-to-Ambient	$R_{\theta JA}$	60	°C/W

**» Electrical Characteristics (Tc=25°C unless otherwise noted)**

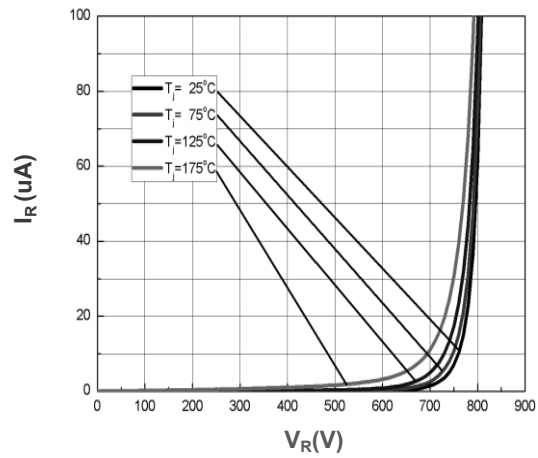
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
<b>Static Parameters</b>						
DC Blocking Voltage	$V_{DC}$	$I_R=100\mu A$	650	-	-	V
Forward Voltage	$V_F$	$I_F=4A$	-	1.5	1.7	V
		$I_F=4A, T_J=175^\circ C$	-	1.8	2.3	V
Reverse Current	$I_R$	$V_R=650V$	-	0.5	10	$\mu A$
		$V_R=650V, T_J=175^\circ C$	-	10	50	$\mu A$
<b>AC Parameters</b>						
Total Capacitive Charge	$Q_C$	$I_F=4A,$ $dI/dt=500A/\mu s,$ $V_R=400V, T_J=25^\circ C$	-	8.5	-	nC
Total Capacitive	C	$V_R=1V, f=1MHz$	-	135	-	pF
		$V_R=200V, f=1MHz$	-	17	-	
		$V_R=400V, f=1MHz$	-	16	-	



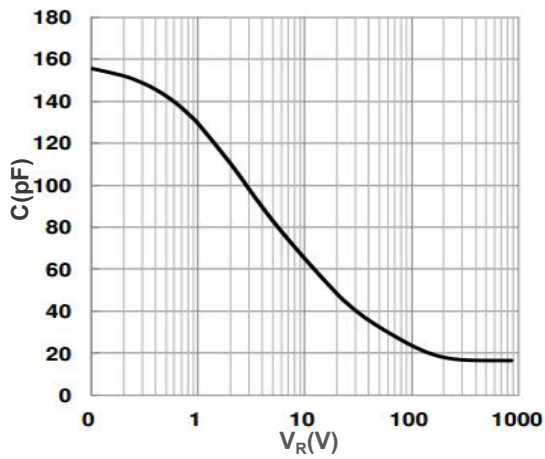
## Characteristics Curves



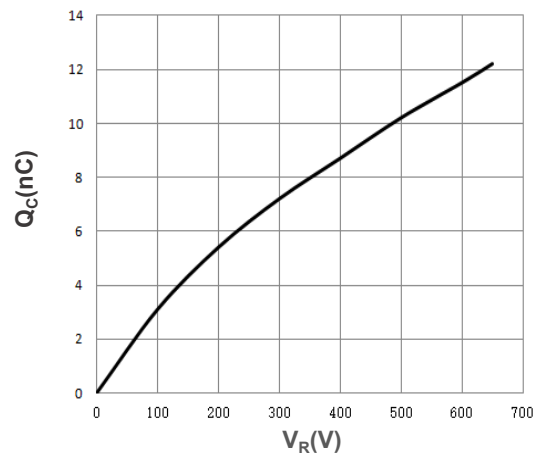
Forward Characteristics



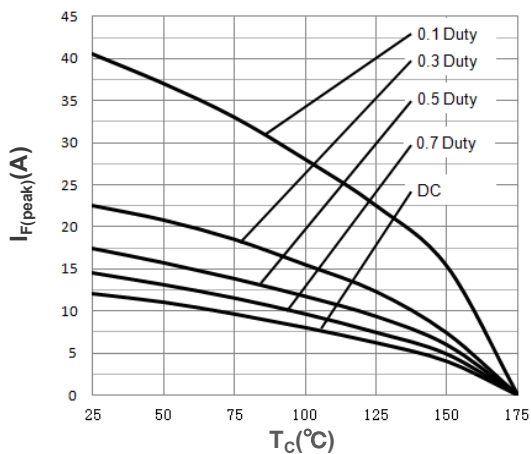
Reverse Characteristics



Capacitance



Recovery Charge vs. Reverse Voltage



Current Derating



TO-220F Package Dimensions

Unit: mm

Symbol	Min	Nom	Max	Symbol	Min	Nom	Max
A	4.5		4.9	E1		7	
A1	2.3		2.9	e		2.54	
b	0.45		0.9	e1	1		1.5
b1	1.1		1.7	L	12.5		14.3
b2	1.2		1.4	L1	9.45		10.05
c	0.35		0.9	L2	15		16
D	14.5		17	L3	3.2		4.4
D1	6.1		6.9	ΦP	3		3.3
E	9.6		10.3	Q	2.5		2.9

