

■ ABSOLUTE MAXIMUM RATING (limiting values, per leg)

PARAMETER	SYMBOL	RATINGS	UNIT
Repetitive Peak Reverse Voltage	V_{RRM}	200	V
RMS Forward Current	$I_{F(RMS)}$	10	A
Average Forward Current $\delta=0.5$ $T_C=125^\circ\text{C}$ (Per leg)	$I_{F(AV)}$	5	A
Surge Non Repetitive Forward Current, $t_p=10\text{ms}$ Sinusoidal	I_{FSM}	50	A
Storage temperature range	T_{stg}	-60 ~ +150	$^\circ\text{C}$

Note 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. The device is guaranteed to meet performance specification within $0^\circ\text{C}\sim 70^\circ\text{C}$ operating temperature range and assured by design from $-20^\circ\text{C}\sim 85^\circ\text{C}$.

■ ELECTRICAL CHARACTERISTICS (per leg)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT	
Reverse Leakage Current (Note1)	I_R	$T_J = 25^\circ\text{C}$	$V_R = V_{RRM}$			50	μA
		$T_J = 100^\circ\text{C}$				0.6	mA
Forward Voltage Drop (Note2)	V_F	$T_J = 25^\circ\text{C}$	$I_F = 5\text{ A}$			0.9	V
		$T_J = 125^\circ\text{C}$	$I_F = 5\text{ A}$		0.69	0.74	V

Note1. $t_p = 5\text{ ms}$, $\delta < 2\%$

2. $t_p = 380\ \mu\text{s}$, $\delta < 2\%$

To evaluate the conduction losses use the following equation: $P = 0.78 \times I_{F(AV)} + 0.042 \times I_F^2(\text{RMS})$

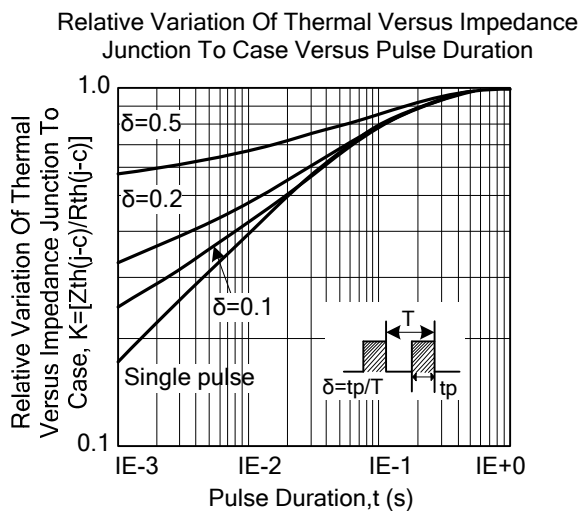
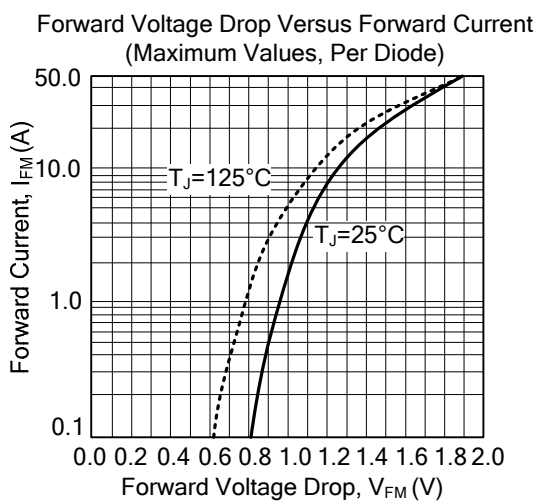
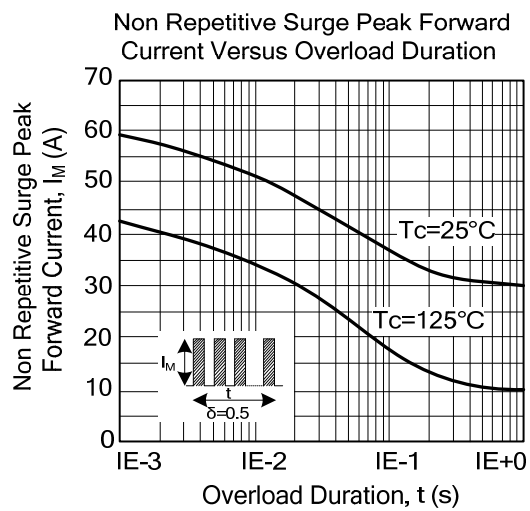
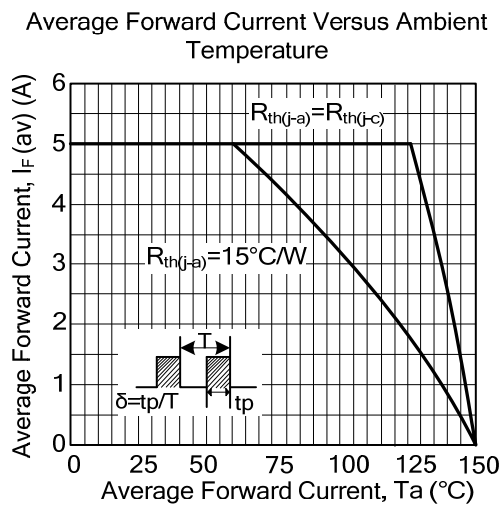
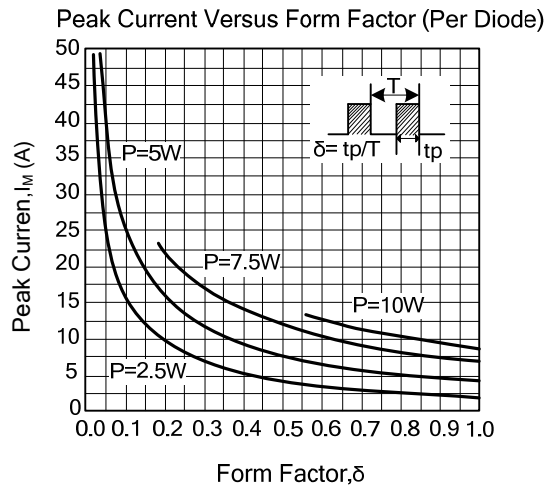
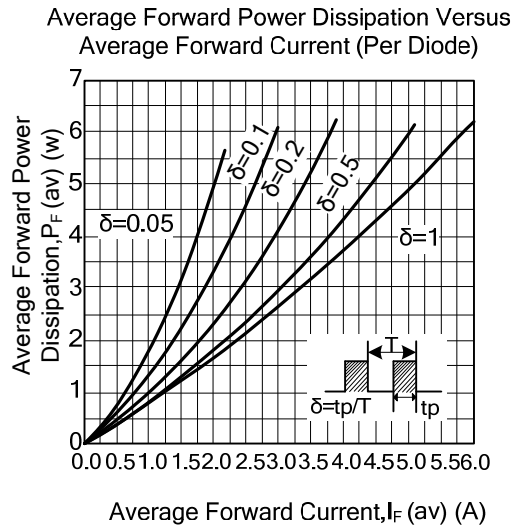
■ RECOVERY CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Recovery Time	t_{rr}	$T_J = 25^\circ\text{C}$, $I_F = 0.5\text{A}$, $V_F = 30\text{V}$, $I_R = 1\text{A}$			40	ns
Formard Recovery Time	t_{fr}	$T_J = 25^\circ\text{C}$, $I_F = 1\text{A}$, $dI_F/dt = 50\text{ A}/\mu\text{s}$ $V_R = 30\text{V}$		33		ns
	V_{FP}	$T_J = 25^\circ\text{C}$, $I_F = 1\text{A}$, $dI_F/dt = 50\text{ A}/\mu\text{s}$		3		V

Note: When diodes 1 and 2 are used simultaneously :

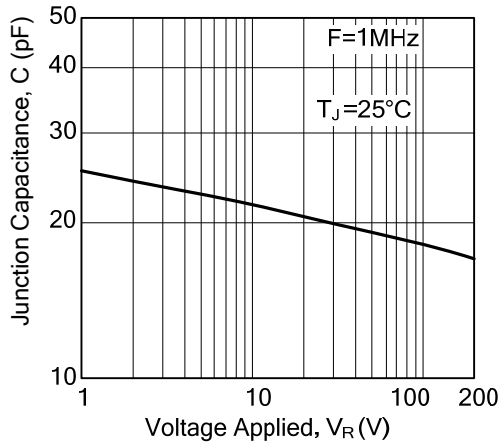
$$\Delta T_J (\text{diode } 1) = P(\text{diode } 1) \times R_{th(j-c)} (\text{ per leg}) + P(\text{diode } 2) \times R_{th(c)}$$

TYPICAL CHARACTERISTICS

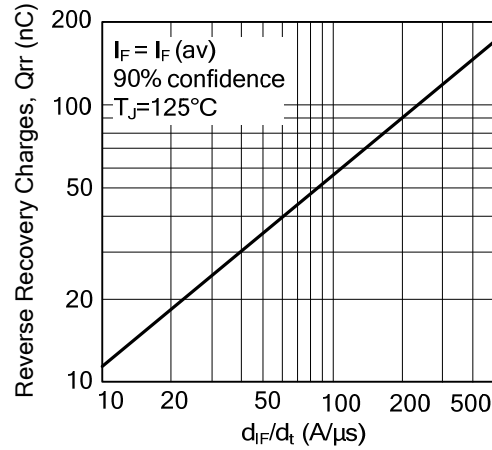


■ TYPICAL CHARACTERISTICS (Cont.)

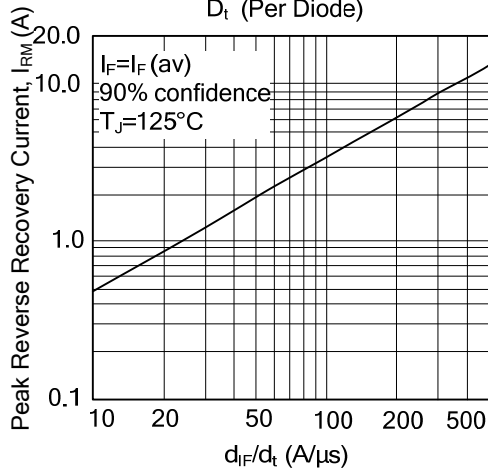
Junction Capacitance Versus Reverse Voltage Applied (Typical Values, Per Diode)



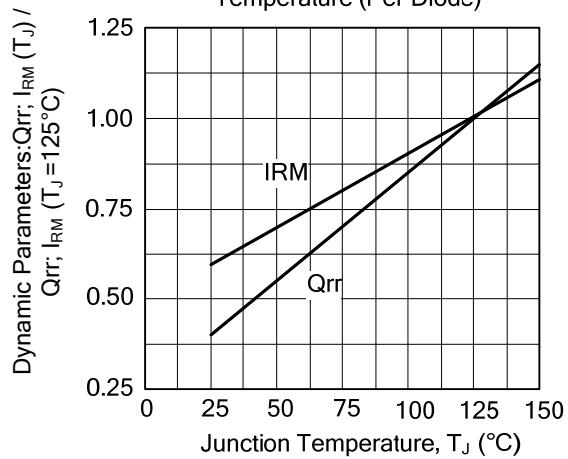
Reverse Recovery Charges Versus dI_F/dt (Per Diode)



Peak Reverse Recovery Current Versus dI_F/dt (Per Diode)



Dynamic Parameters Versus Junction Temperature (Per Diode)



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