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NTE571 General Purpose Silicon Rectifier Soft Recovery Controlled Avalanche

Absolute Maximum Ratings:

Repetitive Peak Reverse Voltage, V_{RRM}	1000V
Continuous Reverse Voltage, V_R	1000V
Average Forward Rectified Current, $I_{F(AV)}$.394" (10mm) lead length, $T_{tp} = +55^{\circ}C$	2.9A
$T_A = +65^{\circ}C$	1.2A
Repetitive Peak Forward Current, I_{FRM} $T_{tp} = +55^{\circ}C$	33A
$T_A = +65^{\circ}C$	11A
Non-Repetitive Peak Forward Current, I_{FSM} $t = 10ms$, half sine-wave, $T_J = +175^{\circ}C$ prior to surge, $V_R = 1000V$	65A
Non-Repetitive Peak Reverse Avalanche Energy, E_{RSM} $I_R = 400mA$, $T_J = +175^{\circ}C$ prior to surge; with inductive load off	10mJ
Operating Junction Temperature Range, T_J	-65° to $+175^{\circ}C$
Storage Temperature Range, T_{stg}	-65° to $+175^{\circ}C$
Thermal Resistance, Junction-to-Tie Point (10mm lead length), R_{thjtp}	25K/W
Thermal Resistance, Junction-to-Ambient, R_{thja} Mounted on 1.5mm thick PC Board, Cu-thickness > 40 μ m	75K/W

Electrical Characteristics: ($T_J = +25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage Drop	V_F	$I_F = 3A$, $T_J = +175^{\circ}C$, Note 1	-	-	1.28	V
		$I_F = 3A$, Note 1	-	-	1.78	V
Reverse Avalanche Breakdown Voltage	$V_{(BR)R}$	$I_R = 0.1mA$	1100	-	-	V
Reverse Current	I_R	$V_R = 1000V$	-	-	5	μA
		$V_R = 1000V$, $T_J = +165^{\circ}C$	-	-	150	μA
Reverse Recovery Time	t_{rr}	when switched from $I_F = 0.5A$ to $I_R = 1A$ measured at $I_R = 0.25A$	-	-	150	ns

Note 1. Measured under pulse conditions to avoid excessive dissipation.

