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NTE6085 Silicon Dual Schottky Rectifier 45V, 15 Amp, TO220

Description:

The NTE6085 is a silicon dual power rectifier in a TO220 type package designed using the Schottky Barrier principle with a platinum barrier metal.

Features:

- Plastic Package
- Metal to Silicon Rectifier, Majority Carrier Conduction
- Low Power Loss, High Efficiency
- High Current Capability, Low V_T
- High Surge Capability

Applications:

- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection

Absolute Maximum Ratings:

Maximum Recurred Peak Reverse Voltage, V_{RRM}	45V
Working Peak Reverse Voltage, V_{RWM}	31.5V
DC Blocking Voltage, V_R	45V
Maximum Average Rectified Forward Current ($T_C = +105^\circ\text{C}$), $I_{F(AV)}$	
Per Diode	7.5A
Per Device	15A
Peak Forward Surge Current, I_{FSM} (8.3ms, Single Half Sine-Wave Superimposed on Rated Load)	150A
Peak Repetitive Reverse Surge Current (2 μ s, 1kHz), I_{FRM}	1A
Peak Repetitive Reverse Current (2 μ s, 1kHz), I_{RRM}	0.5A
Operating Junction Temperature Range, T_J	-65° to +150°C
Storage Temperature Range, T_{stg}	-65° to +175°C
Voltage Rate of Change ($V_R = 45\text{V}$), dv/dt	1000V/ μ s
Typical Thermal Resistance, Junction-to-Case, R_{thJC}	3°C/W
Lead Temperature (During Soldering, .250" (6.35mm) from case, 10sec max), T_L	+250°C

Electrical Characteristics (Per Diode Leg): (Note 1)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Instantaneous Forward Voltage	v_F	$i_F = 7.5\text{A}, T_C = +125^\circ\text{C}$	-	-	0.57	V
		$i_F = 15\text{A}, T_C = +125^\circ\text{C}$	-	-	0.72	V
		$i_F = 15\text{A}, T_C = +125^\circ\text{C}$	-	-	0.84	V
Instantaneous Reverse Current	i_R	$V_R = 45\text{V}, T_C = +125^\circ\text{C}$	-	-	15	mA
		$V_R = 45\text{V}, T_C = +25^\circ\text{C}$	-	-	0.1	mA

Note 1. Pulse Test: Pulse Width = 300 μ s, Duty Cycle \leq 2%.

