



**SCHOTTKY BARRIER RECTIFIER**  
**VOLTAGE 90 Volts CURRENT 12.0 Amperes**

**FEATURES**

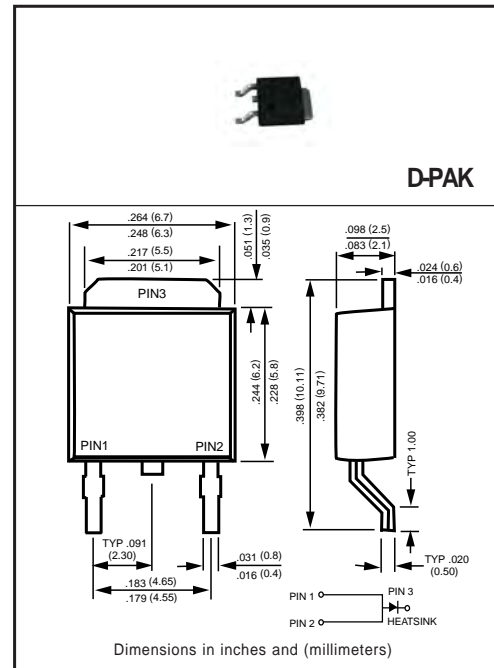
- \* High reliability
- \* Low switching loss
- \* Low forward voltage drop
- \* High current capability
- \* High switching capability

**MECHANICAL DATA**

- \* Epoxy: Device has UL flammability classification 94V-0
- \* Case: Molded plastic
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting: position: Any
- \* Weight: 0.33 grams

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
resistive or inductive load.



**MAXIMUM RATINGS** (@ TA=25 °C unless otherwise noted)

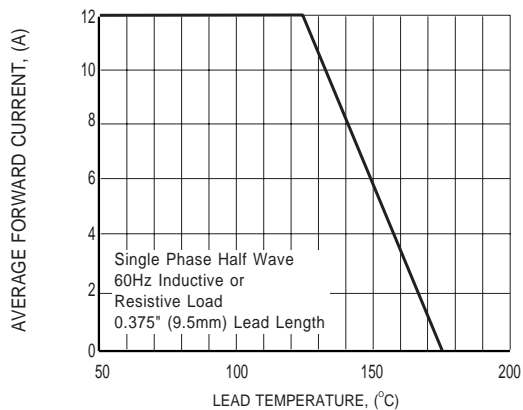
RATINGS	SYMBOL	SPK1290K	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	90	Volts
Maximum RMS Voltage	$V_{RMS}$	63	Volts
Maximum DC Blocking Voltage	$V_{DC}$	90	Volts
Maximum Average Forward Rectified Current at Derating Lead Temperature	$I_O$	12.0	Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150	Amps
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	2.0	°C/W
	$R_{\theta JA}$	60	
Typical Junction Capacitance (Note 2)	$C_J$	700	pF
Operating Temperature Range	$T_J$	175 (Tj ≤ 200°C in By pass Mode)	°C
Storage Temperature Range	$T_{STG}$	-55 to + 175	°C

**ELECTRICAL CHARACTERISTICS** (@TA=25 °C unless otherwise noted)

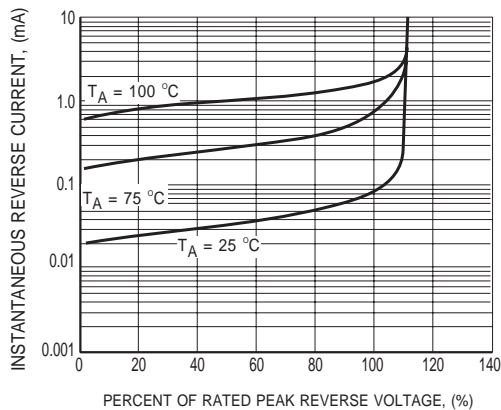
CHARACTERISTICS	SYMBOL	SPK1290K	UNITS
Maximum Instantaneous Forward Voltage at 12.0A DC	$V_F$	.65	Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@ $T_A = 25^\circ C$	0.1	mA
	@ $T_A = 100^\circ C$	2	mA

- NOTES :
1. Thermal Resistance : Heat-sink case mounted or if PCB mounted.
  2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
  3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
  4. Suffix "R" for Reverse Polarity.
  5. Suffix "S" for D2-PAK Pkg.
  6. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

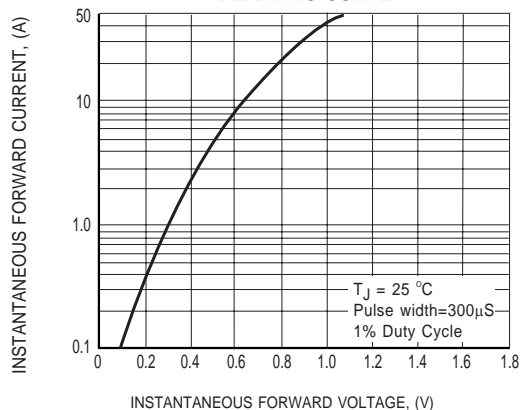
## RATING AND CHARACTERISTICS CURVES ( SPK1290K )



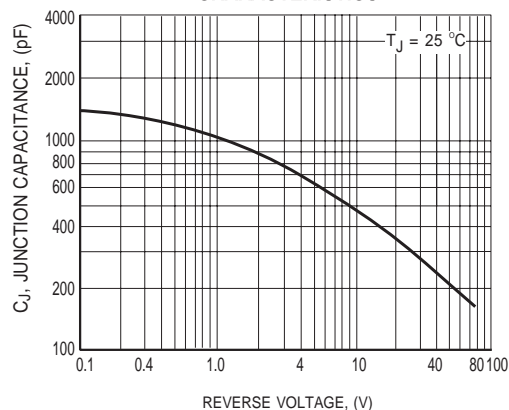
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



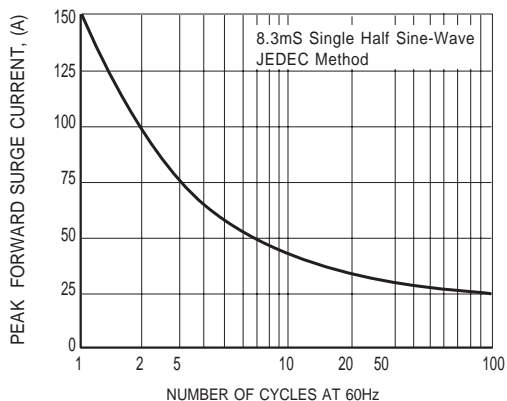
**FIG.2 TYPICAL REVERSE CHARACTERISTICS**



**FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4 TYPICAL JUNCTION CAPACITANCE**



**FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

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