

Schottky Rectifier

REVERSE VOLTAGE: 45 VOLTS
FORWARD CURRENT: 30.0 AMPERE

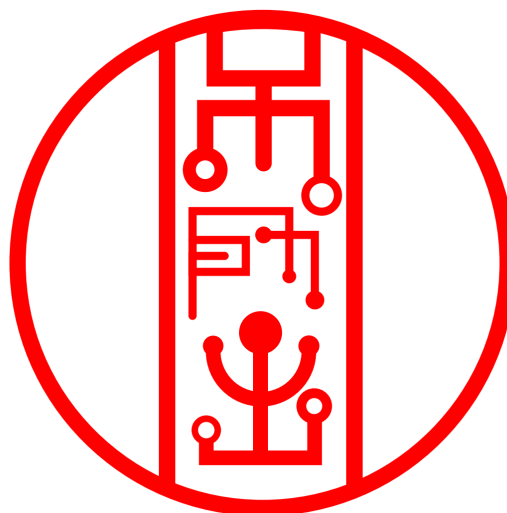
MT09E

FEATURES

- High current capability, low forward voltage drop
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection.
- High surge capability
- Low power loss, high efficiency

GENERAL DESCRIPTION

SK30MT045, the Schottky rectifier series has been optimized for low forward voltage drop at working current. The proprietary barrier technology allows for reliable operation up to 150°C junction temperature. Typical applications are in photovoltaic junction box as low voltage, high frequency bypass diode, and etc.



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics (T_C=25°C unless otherwise noted)

Symbol	Parameter			SK30MT045		Units
V _{RRM}	Maximum Repetitive Peak Reverse Voltage			45		V
V _{RMS}	Maximum RMS Voltage			28		V
V _R	Maximum DC Reverse Voltage			45		V
I _(AV)	Maximum Average Forward Rectified Current			30		A
I _{FSM}	Peak Forward Surge Current			≥400		A
V _F	Maximum Instantaneous Forward Voltage	T _C =25°C		Typ.	Max.	V
			I _F =10A	0.46	0.48	
		T _C =125°C	I _F =20A	0.515	0.55	
			I _F =10A	0.360	0.38	
			I _F =20A	0.433	0.48	
I _R	Maximum Instantaneous Reverse Current	Rated V _R	T _C =25°C	0.062	0.1	mA
			T _C =125°C	9.47	10	mA
ESD	Electro-Static Discharge Endurance			± 30		KV
R _{θJC}	Typical Thermal Resistance			5		°C/W
T _J , T _{stg}	Operating and Storage Temperature Range			-55 to +150		°C



Typical Characteristics

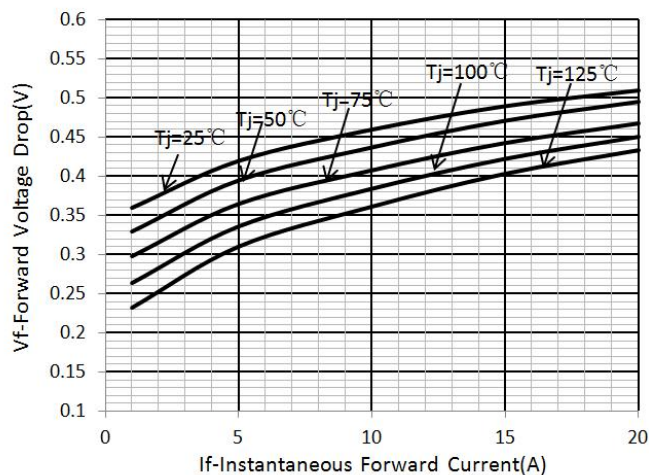


Figure 1. Maximum Forward Voltage Drop Characteristics

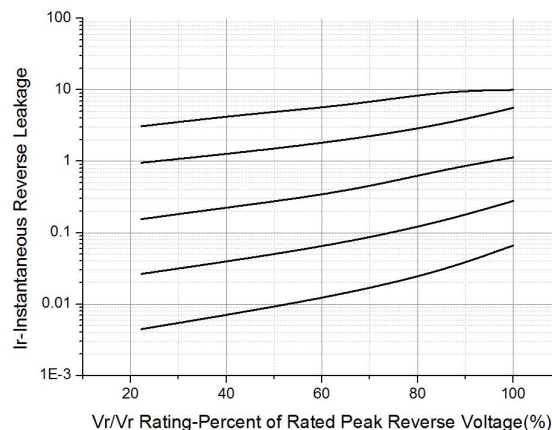


Figure 2. Typical Reverse Leakage Characteristics

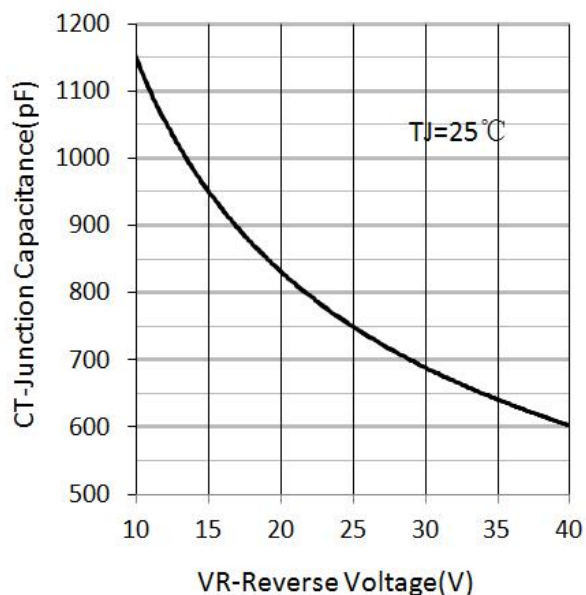


Figure 3. Typical Junction Capacitance vs Reverse Voltage