DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SK12 THRU SK120

TECHNICAL SPECIFICATIONS OF SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE - 20 to 200 Volts   CURRENT - 1.0 Ampere

FEATURES
* Ideal for surface mounted applications
* Low leakage current
* Glass passivated junction
* Low forward voltage drop
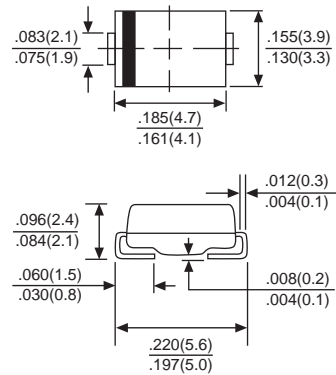* Low power loss, high efficiency
* High surge capability

MECHANICAL DATA
* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Terminals: Solder plated solderable per
  MIL-STD-750, Method 2026
* Polarity: As marked
* Mounting position: Any
* Weight: 0.093 gram

SMB (DO-214AA)

.083(2.1) / .075(1.9)
.155(3.9) / .130(3.3)
.185(4.7) / .161(4.1)
.012(0.3) / .004(0.1)
.096(2.4) / .084(2.1)
.060(1.5) / .030(0.8)
.008(0.2) / .004(0.1)
.220(5.6) / .197(5.0)

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

		SYMBOL	SK12	SK13	SK14	SK15	SK16	SK18	SK110	SK115	SK120	UNITS
Maximum Recurrent Peak Reverse Voltage		V$_{RRM}$	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS Voltage		V$_{RMS}$	14	21	28	35	42	56	70	105	140	Volts
Maximum DC Blocking Voltage		V$_{DC}$	20	30	40	50	60	80	100	150	200	Volts
Maximum Average Forward Rectified Current at Derating Lead Temperature		I$_O$					1.0					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I$_{FSM}$					30					Amps
Maximum Instantaneous Forward Voltage at 1.0A DC		V$_F$		0.55			0.70		0.85		0.95	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T$_A$ = 25℃	I$_R$					1.0					mAmps
	@T$_A$ = 100℃						10					
Typical Thermal Resistance (Note 1)		R$_{θJL}$					25					℃/W
Storage Operating Temperature Range		T$_J$, T$_{STG}$					-55 to +150					℃

NOTES : 1. Thermal Resistance (Junction to Lead)
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. P.C.B. mounted with 0.28x0.28"(7.0x7.0mm^2) copper pad area.

RATING AND CHARACTERISTIC CURVES (SK12 THRU SK120)
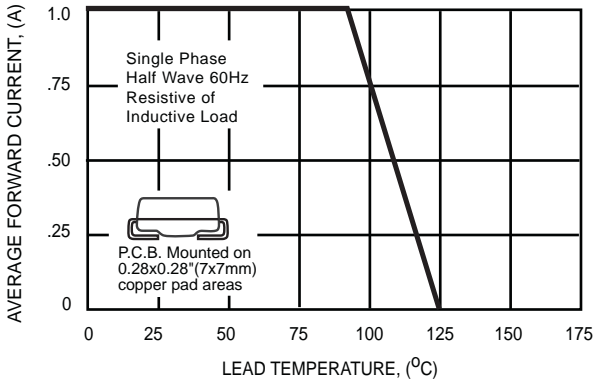
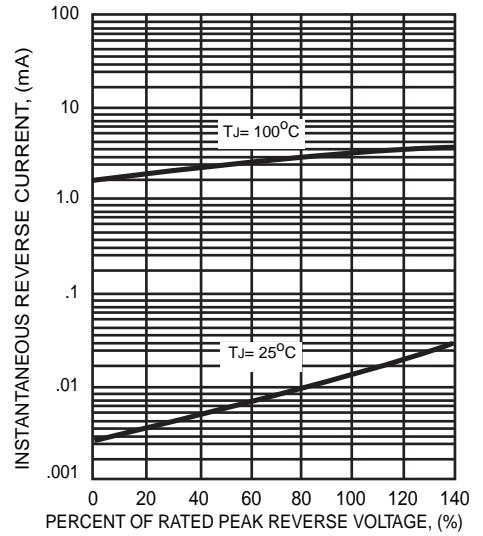FIG.1
TYPICAL FORWARD CURRENT DERATING CURVE

Single Phase
Half Wave 60Hz
Resistive of
Inductive Load

P.C.B. Mounted on
0.28x0.28"(7x7mm)
copper pad areas

AVERAGE FORWARD CURRENT, (A)

LEAD TEMPERATURE, (^{O}C)

FIG.2
TYPICAL REVERSE CHARACTERISTICS

T_J= 100°C

T_J= 25°C

INSTANTANEOUS REVERSE CURRENT, (mA)

PERCENT OF RATED PEAK REVERSE VOLTAGE, (%)

FIG.3
TYPICAL INSTANTANEOUS FORWARD
CHARACTERISTICS

Pulse Width=300ms
1% Duty Cycle

SK18~110

SK15~16

SK12~14

SK110~120

INSTANTANEOUS REVERSE CURRENT, (A)

INSTANTANEOUS FORWARD VOLTAGE, (V)
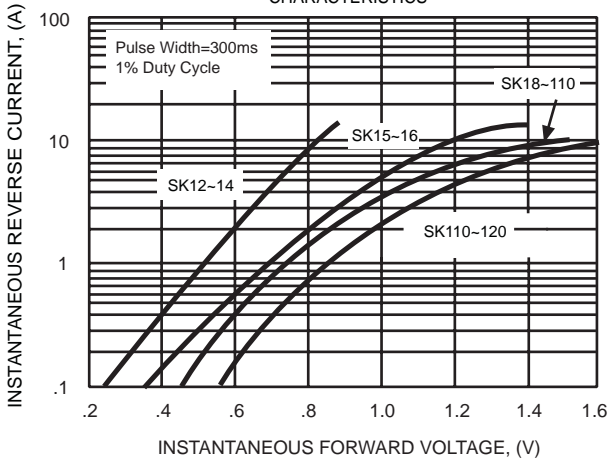
FIG.4
MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT

At rated TL8.3ms Single Half
Sine-Wave(JEDEC Method)

PEAK FORWARD SURGE CURRENT, (A)

NUMBER OF CYCLE AT 60Hz
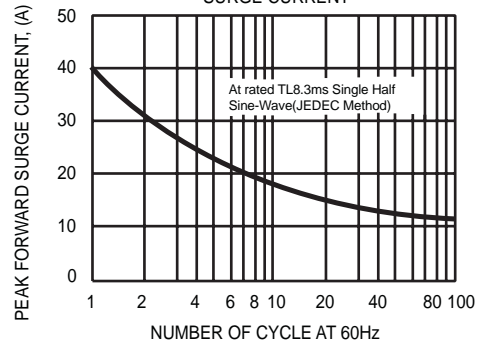
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