DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

BY133 THRU EM520

TECHNICAL SPECIFICATIONS OF GENERAL PURPOSE SILICON RECTIFIER

VOLTAGE RANGE - 1300 to 2000 Volts *CURRENT - 1.0 Ampere*

FEATURES

* Low cost
* Low leakage
* Low forward voltage drop
* High current capability

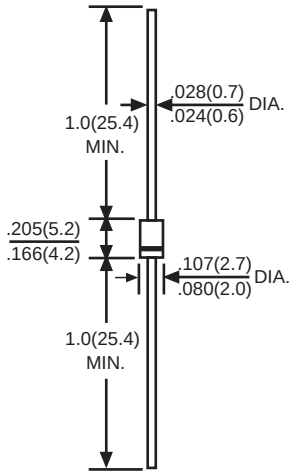
MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rated flame retardant
* Lead: MIL-STD-202E, Method 208 guaranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any
* Weight: 0.33 gram approx.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

DO-41



Dimensions in inches and (millimeters)

		SYMBOL	BY133	EM513	EM516	EM520	UNITS
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	1300	1600	1800	2000	Volts
Maximum RMS Voltage		V_{RMS}	910	1120	1260	1400	Volts
Maximum DC Blocking Voltage		V_{DC}	1300	1600	1800	2000	Volts
Maximum Average Forward Rectified Current 375"(9.5mm) lead length at T_A = 50°C		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	1.1				Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ T_A=25°C	I_R	5.0				μAmps
	@ T_A=100°C		500				
Maximum Full Load Reverse Current Average, Full Cycle .375"(9.5mm) lead length at T_L = 55°C			30				
Typical Junction Capacitance (Note 1)		C_J	15				pF
Typical Thermal Resistance (Note 2)		$R_{\theta JA}$	40				°C/W
Operating and Storage Temperature Range		T_J,T_{STG}	-55 to +150				°C

Note 1: Measured at 1 MHz and applied reverse voltage of 4.0 volts.
Note 2: Typical thermal resistance from junction to ambient.

RATING AND CHARACTERISTIC CURVES (BY133 THRU EM520)

FIG. 1
TYPICAL FORWARD CURRENT
DERATING CURVE

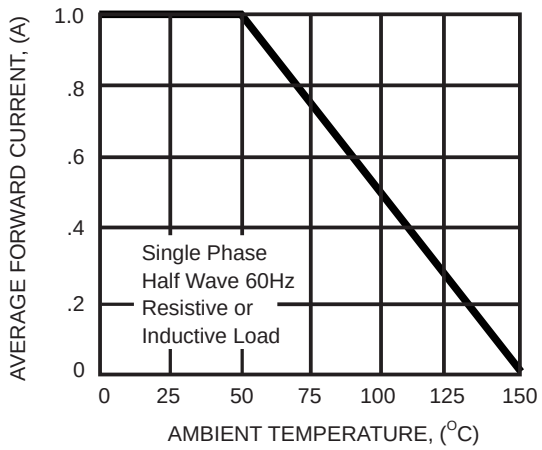


FIG. 2
MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT

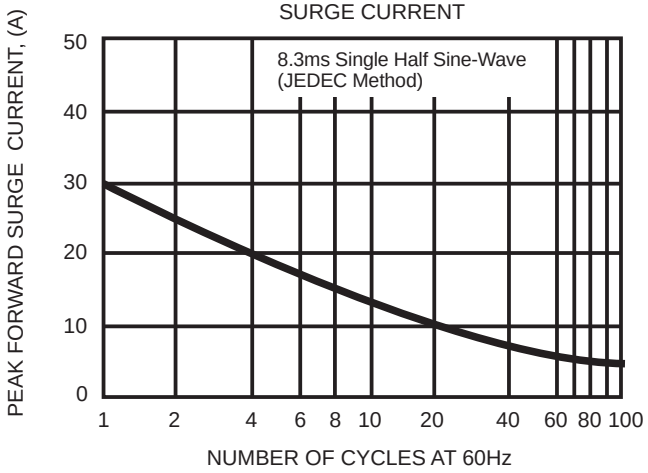


FIG. 3
TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

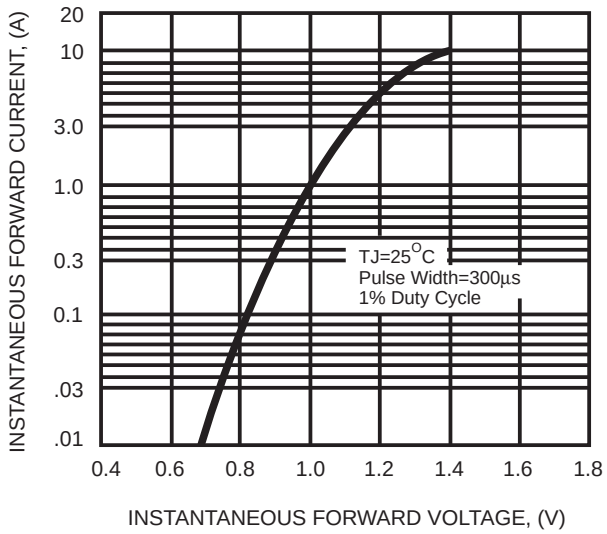


FIG. 4
TYPICAL REVERSE CHARACTERISTICS

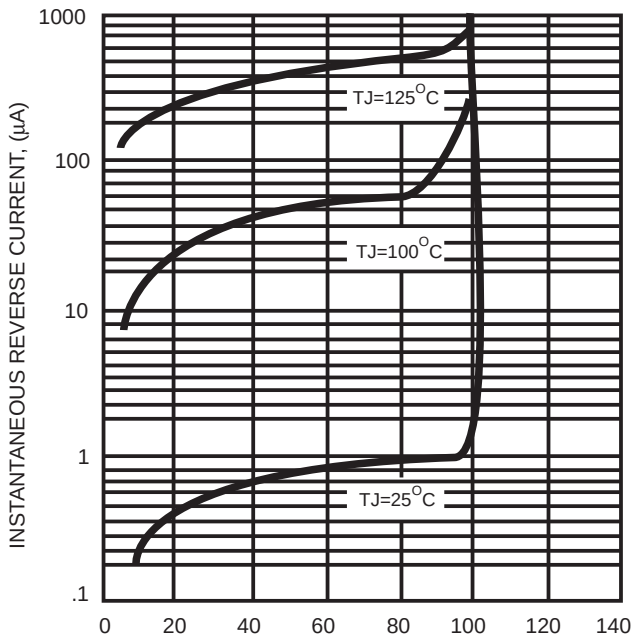
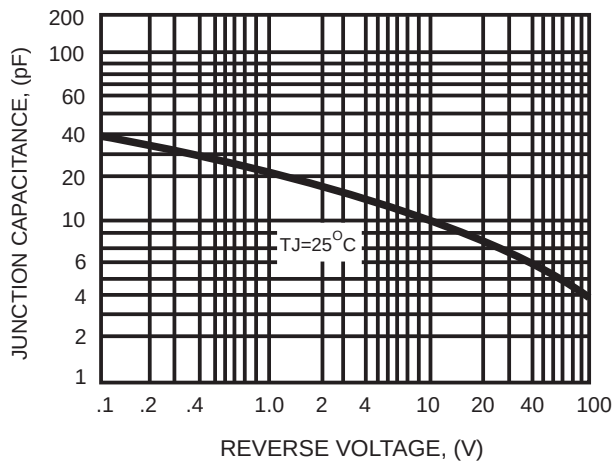


FIG. 5
TYPICAL JUNCTION CAPACITANCE



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