

EM512 THRU EM520

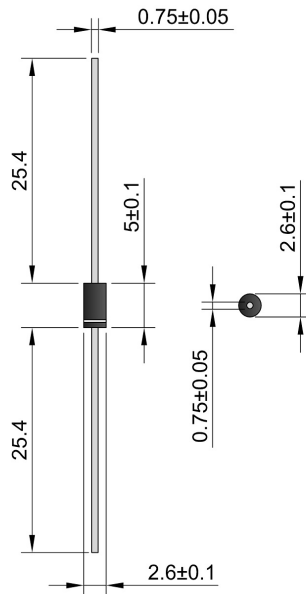
SURFACE MOUNT SILICON RECTIFIER

FEATURES

- Low Forward Voltage Drop
- Low Leakage
- High Current Capability
- High Surge Current Capability
- Plastic Case Material has UL Flammability Classification Rating 94V-O

DO-41

Unit: mm



MECHANICAL DATA

- Case: DO-41 TYPE molded Plastic
- Polarity: as marked
- Weight: 0.35 grams(approx)
- Lead Free:For RoHS/Lead Free Version, Green molding compound as per IEC61249 Std

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Parameter Symbol	Symbol	EM512	EM514	EM516	EM518	EM520	Unit
Device marking code		EM512	EM514	EM516	EM518	EM520	
Maximum repetitive peak reverse voltage	V_{RRM}	1200	1400	1600	1800	2000	V
Maximum RMS voltage	V_{RMS}	840	980	1120	1260	1400	V
Maximum DC blocking voltage	V_{DC}	1200	1400	1600	1800	2000	V
Maximum average forward rectified current	$I_{F(AV)}$	1.0					A
Peak forward surge current:8.3ms single half sine-wave superimposed on rated load	I_{Fsm}	30					A
Maximum instantaneous forward voltage at 1A	V_F	1.15					V
Maximum leakage current $T_J=25^\circ\text{C}$ Maximum leakage current $T_J=100^\circ\text{C}$	I_R	5 50					μA
Typical Junction Capacitance (Note1)	C_J	25	18			pF	
Typical thermal resistance (Note2)	R_{thA}	≤ 55					$^\circ\text{C}/\text{W}$
Operating temperature range	T_J	-55 to +150					$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150					$^\circ\text{C}$

Note: (1).Measured at 1.0MHz and applied reverse voltage of 4.0VDC

(2).Thermal resistance from junction to ambient at 9.5mm lead length, **P.C.B.** mounted.

Fig. 1 Rated forward current vs. ambient temperature

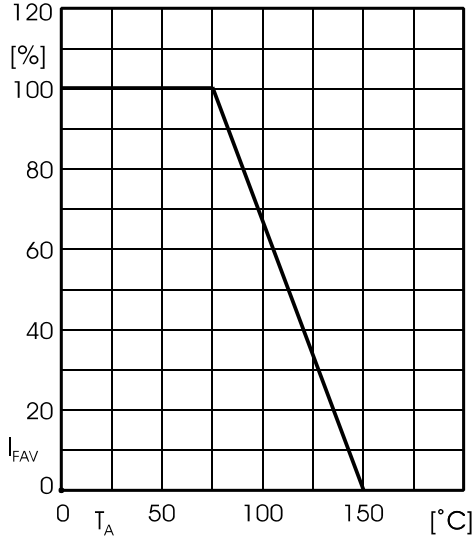


Fig. 2 Forward characteristics (typical values)

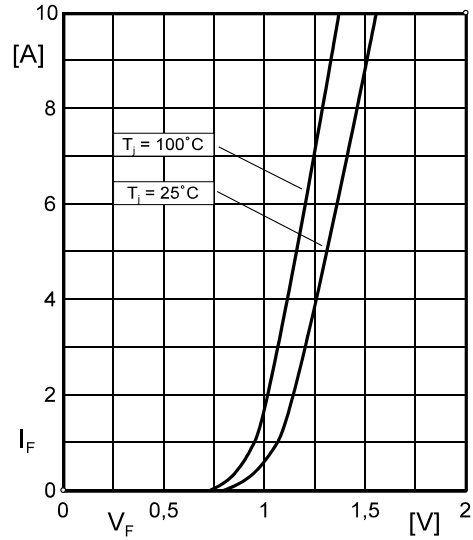


FIG. 3 – MAXIMUM NON-REPETITIVE SURGE CURRENT

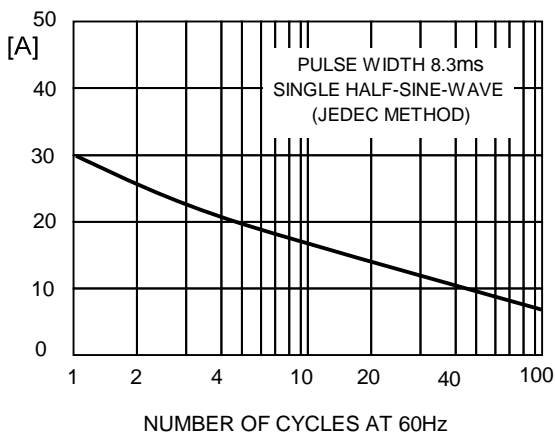


FIG.4-TYPICAL REVERSE CHARACTERISTICS

