

FM540S-AL

5.0A Surface Mount Schottky Barrier Rectifiers 40V

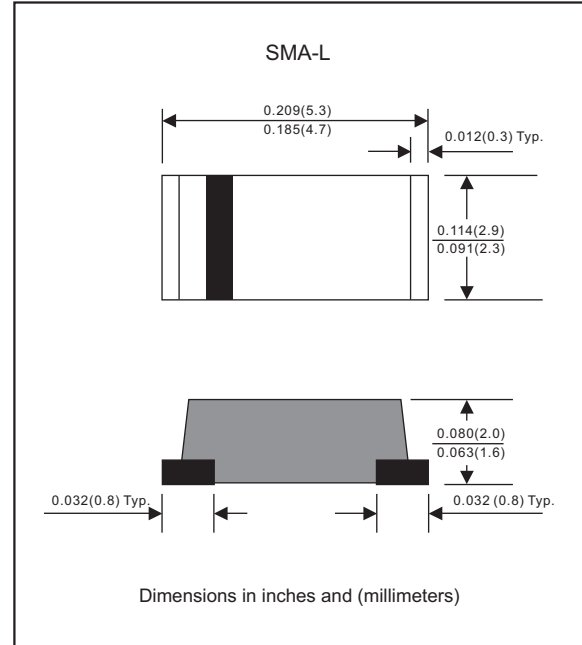
Package outline

Features

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- High current capability, low forward voltage drop.
- Guardring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228
- Suffix "-H" indicates Halogen free parts

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, DO-214AC / SMA-L
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any
- Weight : Approximated 0.05 gram



Maximum ratings (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_O			5.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			80	A
Reverse current	$V_R = V_{RRM} \quad T_J = 25^{\circ}\text{C}$	I_R			0.5	mA
	$V_R = V_{RRM} \quad T_J = 100^{\circ}\text{C}$				20	
Thermal resistance	Junction to ambient	$R_{\theta JA}$			80	$^{\circ}\text{C}/\text{W}$
Diode junction capacitance	$f=1\text{MHz}$ and applied 4V DC reverse voltage	C_J		250		pF
Storage temperature		T_{STG}	-55		+150	$^{\circ}\text{C}$

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	Operating temperature T_J ($^{\circ}\text{C}$)	Marking code
FM540S-AL	40	28	40	0.5@IF=3A 0.55@IF=5A	-55 to +125	S54

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@ $I_F=5.0\text{A}$

Rating and characteristic curves (FM540S-AL)

FIG.1-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

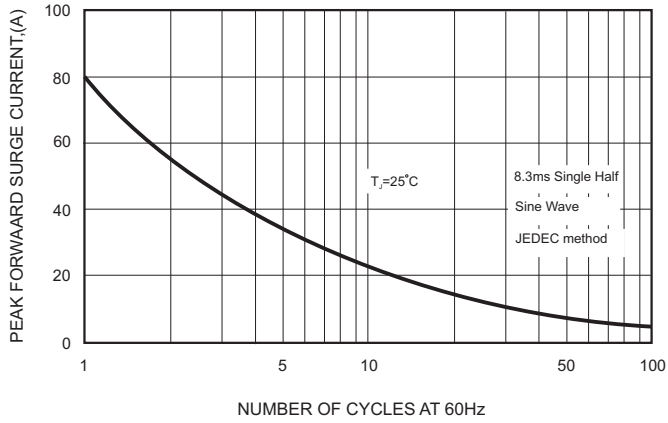


FIG.2-TYPICAL JUNCTION CAPACITANCE

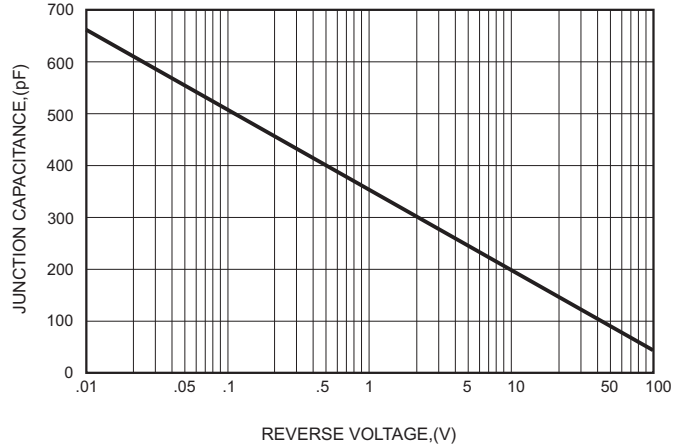


FIG.3-TYPICAL FORWARD CHARACTERISTICS

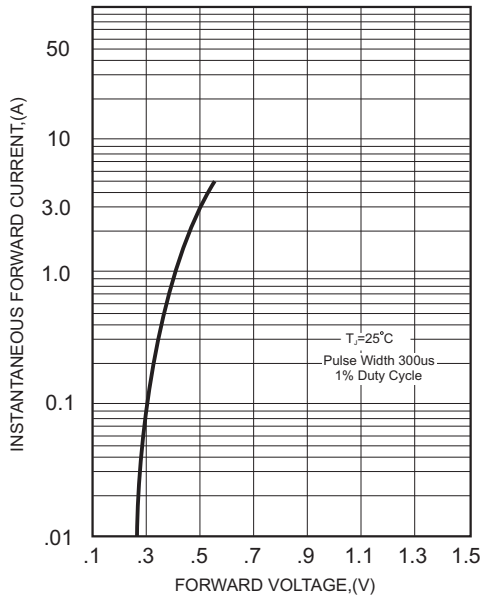
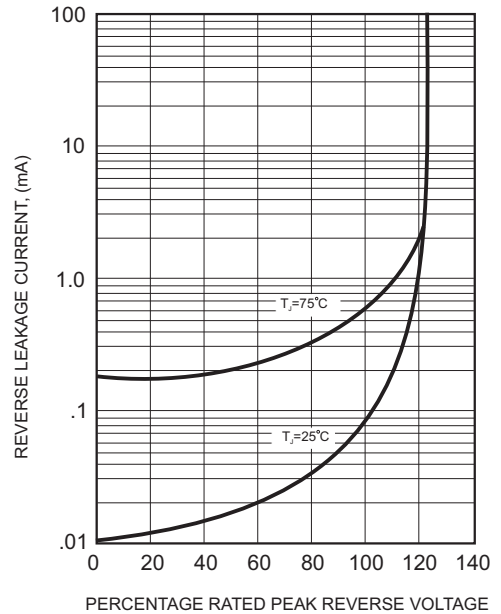


FIG.4 - TYPICAL REVERSE CHARACTERISTICS



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