

# 05S2 THRU 05S4

**SURFACE MOUNT FAST RECOVERY RECTIFIER**



## Features

- High Surge Capability
- Low Forward Voltage
- Low Profile Package

## Mechanical Data

- Packaging: SOD-123FL
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking Code: 05S2---K2; 05S3---K3 ; 05S4---K4

## Maximum Ratings

Symbol	Rating	Rating	Unit	
$V_{RMS}$	Maximum RMS Voltage	05S2	14	
		05S3	21	
		05S4	28	
$V_{RRM}$	Repetitive Reverse Voltage	05S2	20	
		05S3	30	
		05S4	40	
$I_{F(AV)}$	Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_L=90^{\circ}C$	0.5	A	
$I_{FSM}$	Surge Forward Current at $T_L=70^{\circ}C, 8.3ms$	30	A	
$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	Typical Thermal Resistance(Note2)		88	$^{\circ}C/W$
			43	$^{\circ}C/W$
			30	$^{\circ}C/W$
$P_D$	Power Dissipation	1.14	W	
$T_J$	Junction Temperature	-65 to +125	$^{\circ}C$	
$T_{STG}$	Storage Temperature	-65 to +125	$^{\circ}C$	

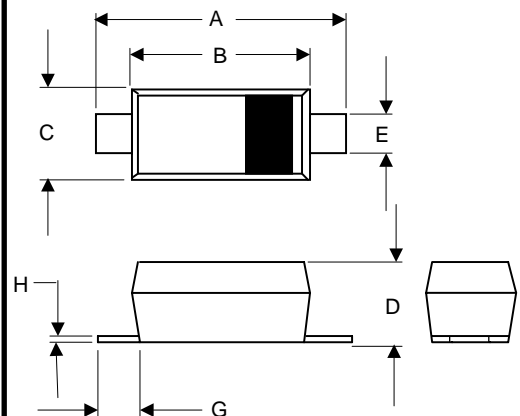
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
$V_F$	Forward Voltage (@1A dc)	05S2	0.45	---	V
		05S3	0.50	---	
		05S4	0.55	---	
$I_R$	Leakage Current	@ $T_A=25^{\circ}C$	0.1	---	mA
		@ $T_A=100^{\circ}C$	9.0	---	
$C_j$	Typical Junction Capacitance @ $f=1.0MHz, V_r=4V$	---	110	---	pF

Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.  
2. Thermal Resistance : PC Board Mounted on 0.2\*0.2"(5\*5mm) copper pad area.

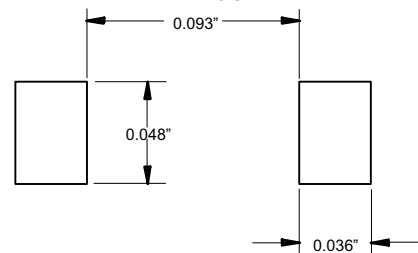
## FAST RECOVERY RECTIFIER 20 to 40 Volts

### SOD-123FL



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.140	.152	3.55	3.85	
B	.100	.122	2.55	3.10	
C	.055	.075	1.40	1.90	
D	.035	.053	0.90	1.35	
E	.020	.041	0.50	1.05	
G	.010	-----	0.25	-----	
H	-----	.010	-----	.25	

### SUGGESTED SOLDER PAD LAYOUT



# 05S2-05S4

Fig. 1-TYPICAL FORWARD CURRENT

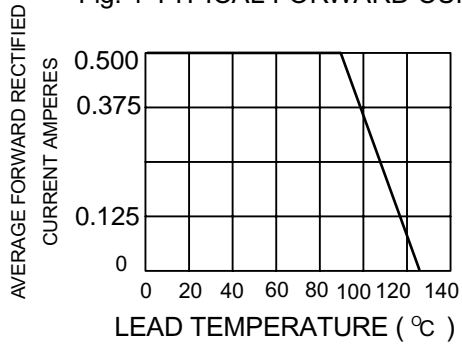


Fig. 2-TYPICAL FORWARD CHARACTERISTICS

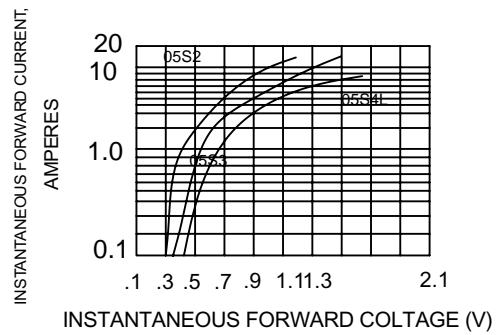


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

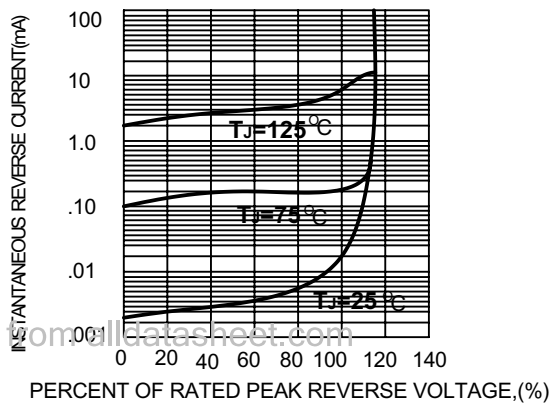


Fig. 4-FORWARD SURGE CURRENT

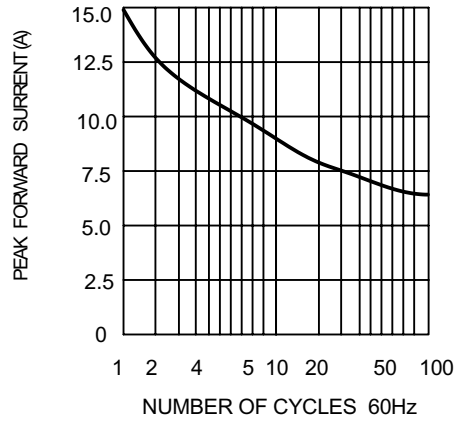


Fig. 5-TYPICAL JUNCTION CAPACITANCE

