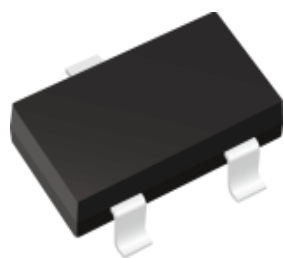


Features

- Ultra low forward voltage, low power loss
- Surface mount package
- Ultra thin profile package for space constrained utilization
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard



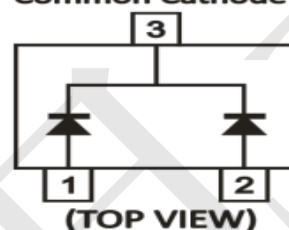
Applications

- Low voltage rectification
- Reverse polarity protection
- Low power consumption applications

Mechanical Data

- Case: Molded plastic, SOT-23
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0003 ounces, 0.0084 grams

Common Cathode



Maximum Ratings (T_A= 25 °C unless otherwise noted)

PARAMETER	SYMBOL	TPMEG4005CT	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	40	V
Maximum rms voltage	V _{RMS}	28	V
Maximum dc blocking voltage	V _R	40	V
Maximum average forward rectified current	I _{F(AV)}	0.5	A
Peak forward surge current: 8.3ms single half sine-wave Superimposed on rated load	I _{FSM}	2	A
Typical thermal resistance	R _{θJA} ⁽¹⁾	350	°C/W
	R _{θJC} ⁽²⁾	180	
Operating junction temperature range	T _J	-55 to +150	°C
Storage temperature range	T _{STG}	-55 to +150	°C

Electrical Characteristics

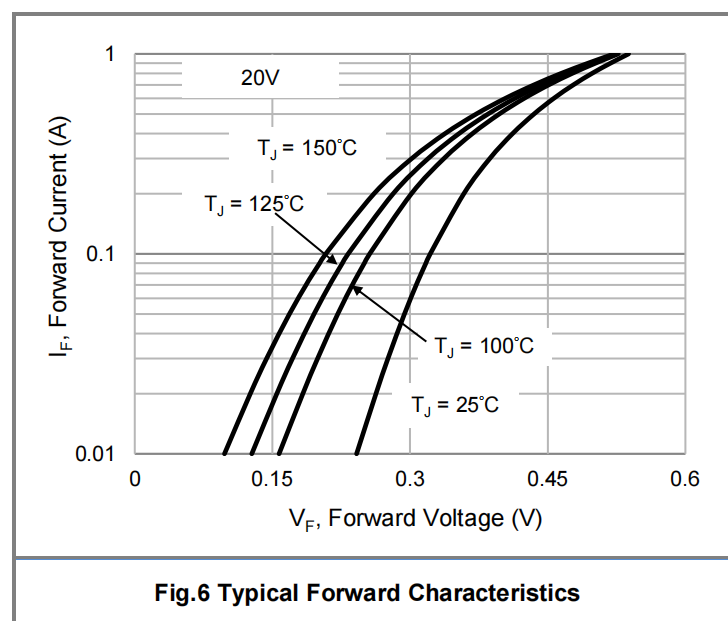
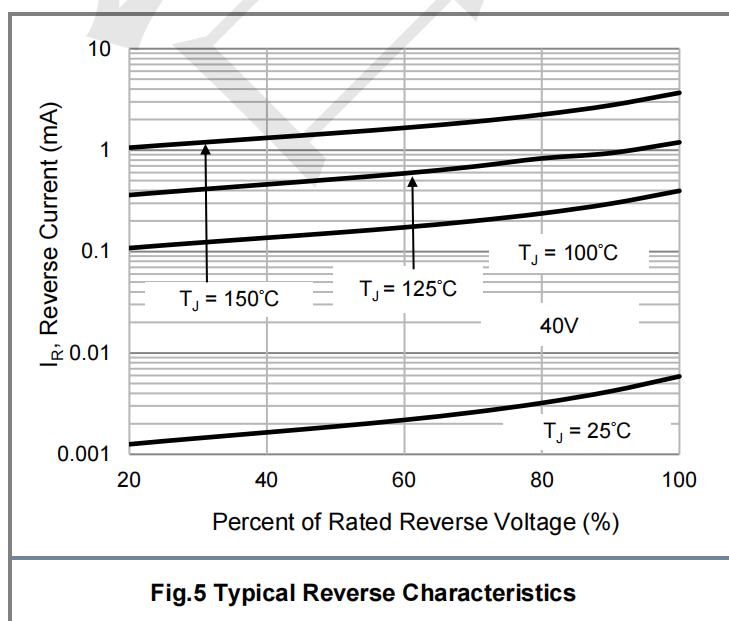
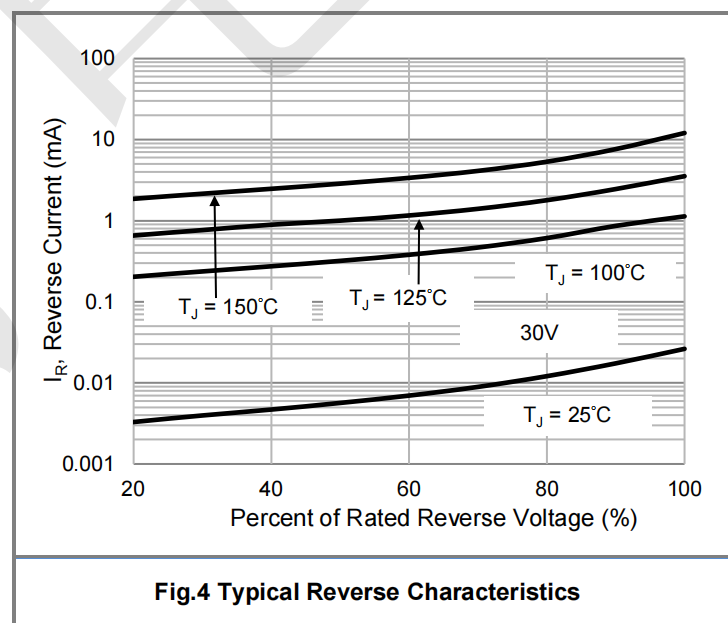
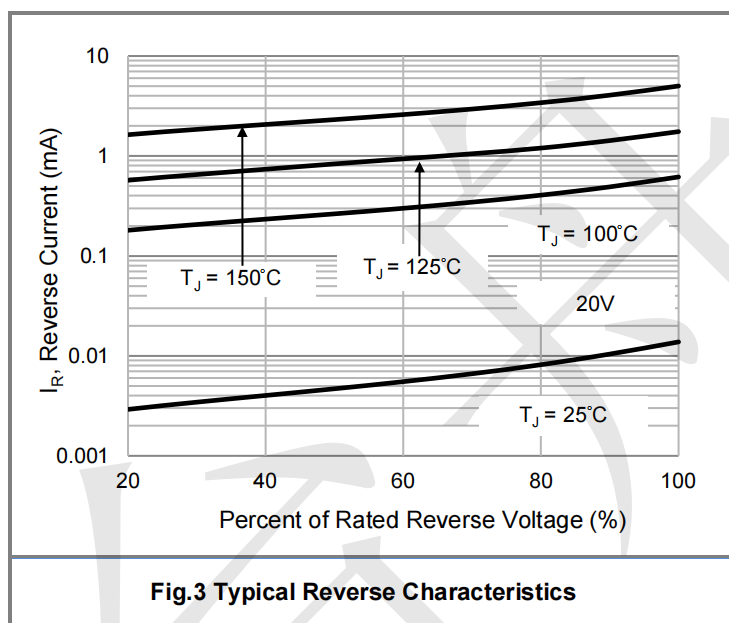
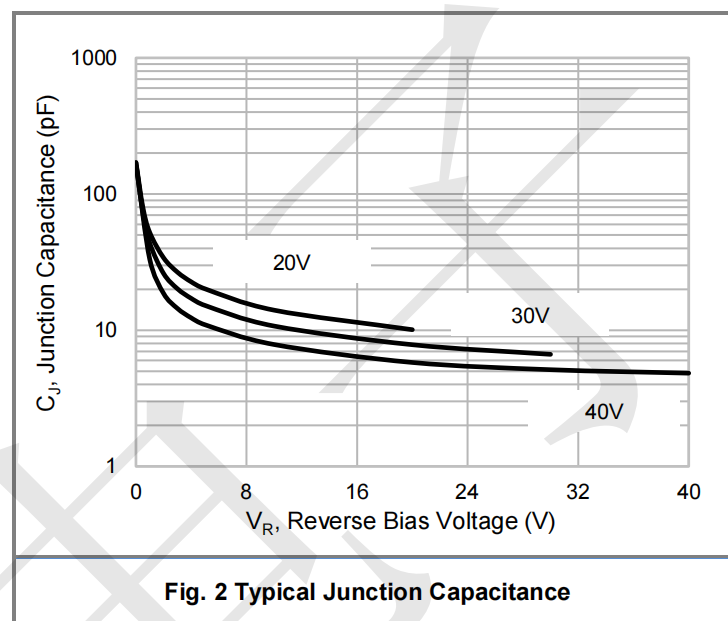
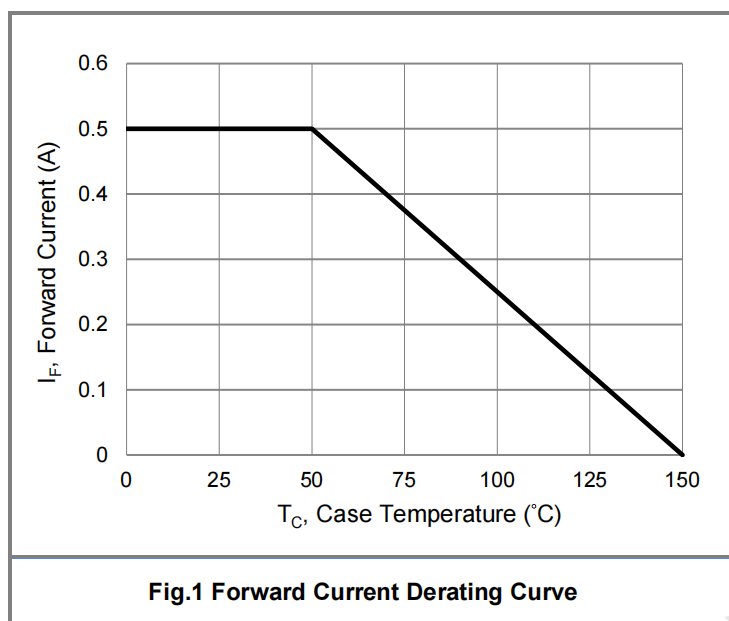
PARAMETER	SYMBOL	TEST CONDITION		TYP.	MAX.	UNIT
Forward voltage	V _F	I _F = 10mA	T _J =25 °C	0.23	-	V
		I _F = 100mA		0.35	-	
		I _F = 500mA		-	0.6	
		I _F = 10mA	T _J =125 °C	0.15	-	V
		I _F = 100mA		0.29	-	
Reverse current	I _R ⁽³⁾	V _R = 10V	T _J =25°C	1.3	-	μA
		V _R = 20V		1.9	-	
		V _R = 30V		3.1	-	
		V _R = 40V		-	50	
		V _R = 20V	T _J =125 °C	0.5	-	mA
		V _R = 30V		0.8	-	
		V _R = 40V		1.3	-	

Note : 1. Mounted on a FR4 PCB, single-sided copper, mini pad.

2. Mounted on a FR4 PCB, single-sided copper, with 100cm² copper pad area.

3. Short duration pulse test used to minimize self-heating effect.

TYPICAL CHARACTERISTIC CURVES



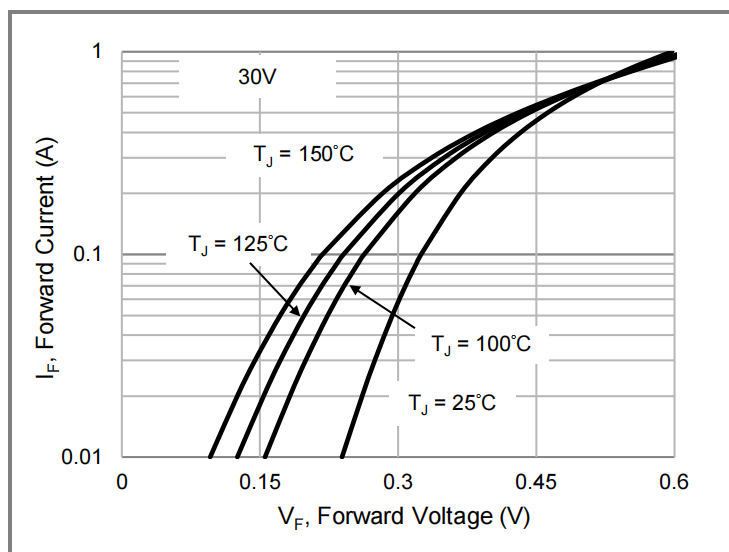


Fig.7 Typical Forward Characteristics

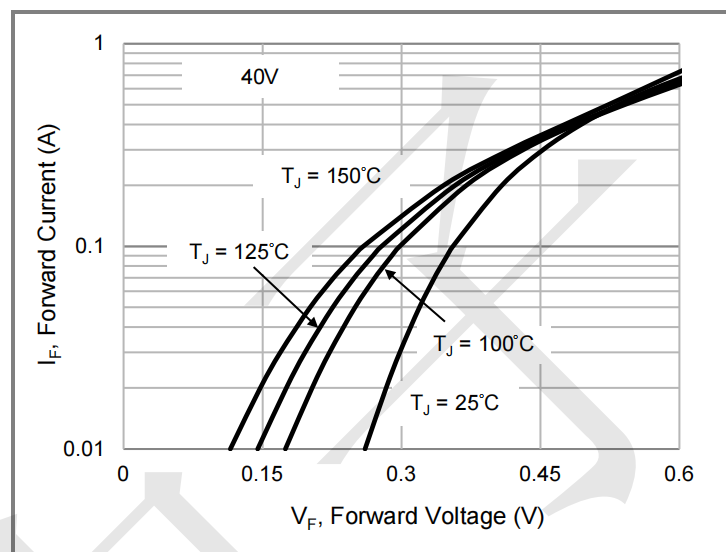


Fig.8 Typical Forward Characteristics

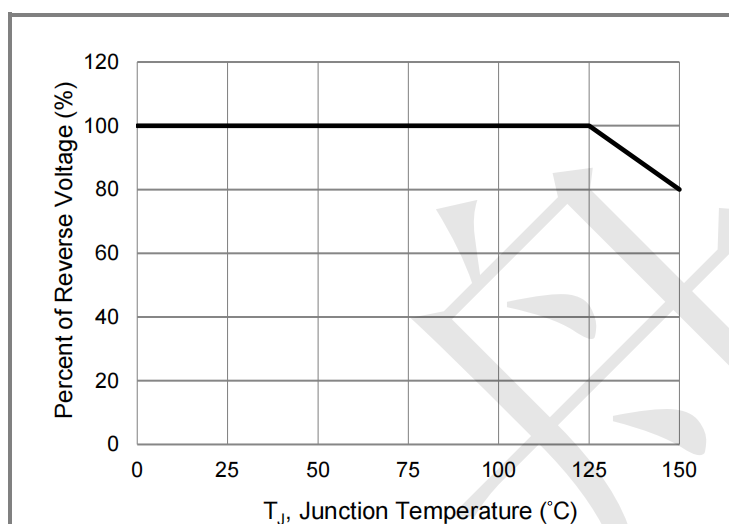
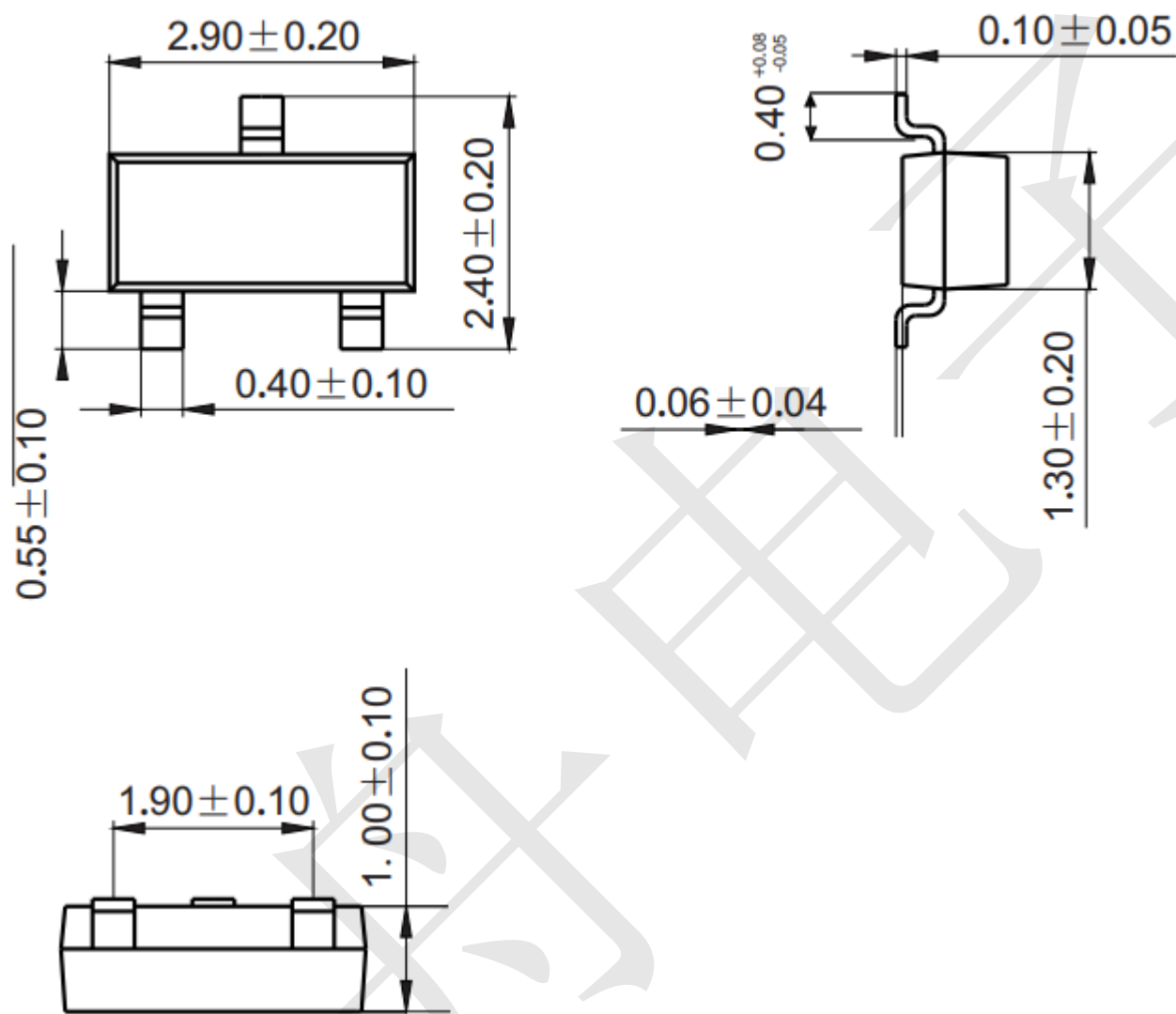


Fig.9 Operating Temperature Derating Curve

Package informantion (Unit: mm)

SOT-23



Mounting Pad Layout (Unit: mm)

