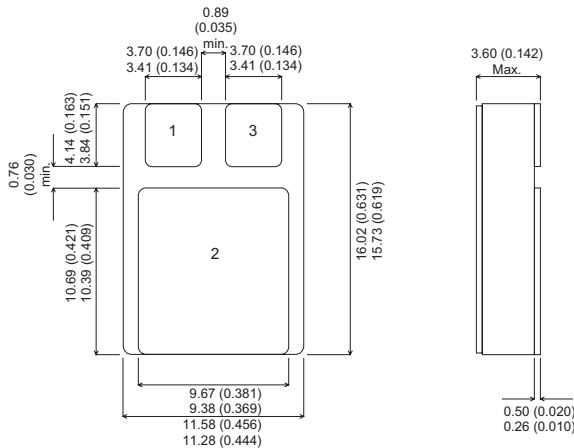


**MECHANICAL DATA**

Dimensions in mm (inches)



**COMMON CATHODE  
SCHOTTKY DIODES IN  
HERMETIC CERAMIC  
SURFACE MOUNT PACKAGE  
FOR HIGH RELIABILITY  
APPLICATIONS**

**PACKAGE SMD1 (TO-276AB)**

**Underside View**

PAD 1 — Anode 1 PAD 2 — Cathode PAD 3 — Anode 2

**ABSOLUTE MAXIMUM RATINGS** ( $T_C = 25^\circ\text{C}$  unless otherwise stated)

$V_{RRM}$	Repetitive Peak Reverse Voltage	220V
$I_{FAV}$	Average Forward Current $T_C = 25^\circ\text{C}$ $T_C = 90^\circ\text{C}$	12A per side 9A per side
$I_{FSM}$	Maximum Surge Forward Current $T_{vj} = 45^\circ\text{C}; t_p = 10\text{ms}$ (50Hz), sine	20A
$T_{vj}$	Virtual Junction Temperature	$-55 + 175^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	$-55 + 150^\circ\text{C}$
$P_{tot}$	$T_C = 25^\circ\text{C}$	78W
$R_{thjc}$	Thermal Characteristics	1.6°C/W

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_R^*$ Reverse Current	$T_{VJ} = 25^\circ\text{C}$ $V_R = V_{RRM}$			1.3	mA
	$T_{VJ} = 125^\circ\text{C}$ $V_R = V_{RRM}$		1.3		
$V_F^*$ Forward Voltage	$I_F = 5\text{A}$ $T_{VJ} = 125^\circ\text{C}$		1.3		V
	$I_F = 5\text{A}$ $T_{VJ} = 25^\circ\text{C}$	1.2		1.5	
$C_J$ Capacitance	$V_R = 100\text{V}$ $T_{VJ} = 125^\circ\text{C}$	18			pF

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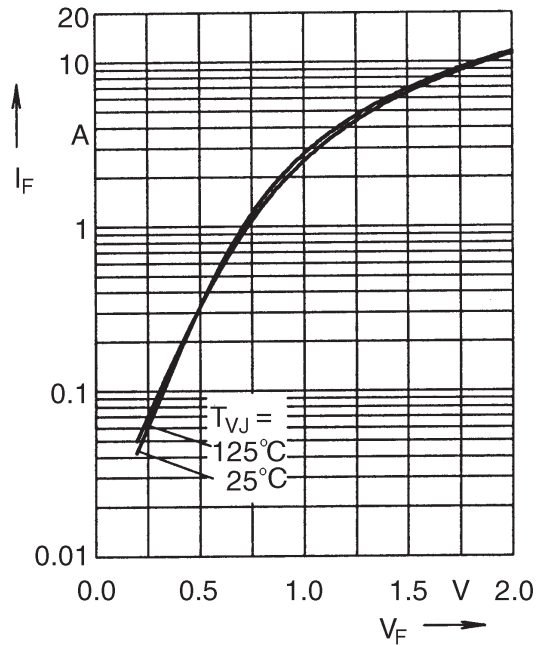


FIG. 1 TYP. FORWARD CHARACTERISTICS

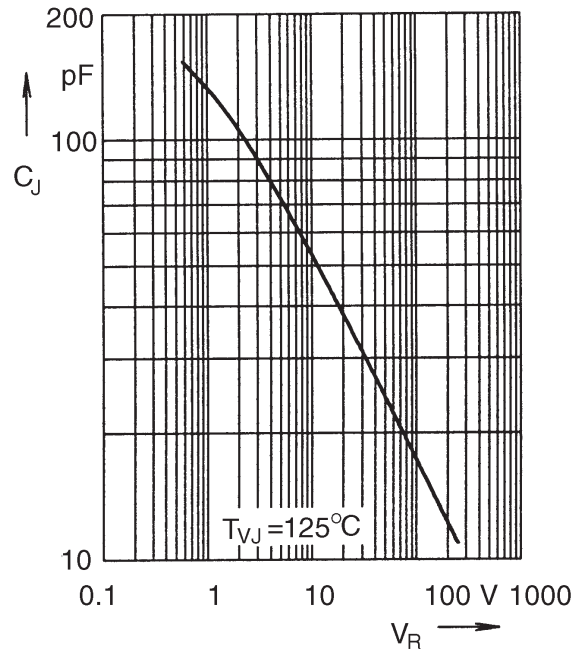


FIG. 2 TYP. JUNCTION CAPACITY VERSUS BLOCKING VOLTAGE

**NOTE:**

Explanatory comparison for the basic operational behaviour of rectifier diodes and Gallium Arsenide Schottky diodes.

	Rectifier Diode	GaAs Schottky Diodoe
Conduction	by majority + minority carriers	by majority carriers only
forward characteristics	$V_F(I_F)$	$V_F(I_F)$ , See Fig 1
turn off characteristics	extraction of excess carriers causes temperature dependant reverse recovery ( $t_{rr}$ , $I_{RM}$ , $Q_{rr}$ )	reverse current charges junction capacity $C_j$ , see Fig 2;
turn on characteristics	delayed saturation leads to $V_{FR}$	not temperature dependant no turn on overvoltage peak.

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