

## HIGH SPEED SWITCHING SILICON EPITAXIAL DOUBLE DIODE : COMMON CATHODE

### FEATURES

- Low capacitance:  $C_t = 1.1$  pF TYP.
- High speed switching:  $t_{rr} = 3.0$  ns MAX.
- Wide applications including switching, limiter, clipper.
- Double diode configuration assures economical use.

### ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Currents ( $T_A = 25^\circ\text{C}$ )

Peak Reverse Voltage	$V_{RM}$	75	V
DC Reverse Voltage	$V_R$	50	V
Surge Current (1 $\mu\text{s}$ ) <sup>Note</sup>	$I_{FSM}$	6.0	A
Surge Current (1 $\mu\text{s}$ )	$I_{FSM}$	4.0	A
Peak Forward Current <sup>Note</sup>	$I_{FM}$	450	mA
Peak Forward Current	$I_{FM}$	300	mA
Average Rectified Current <sup>Note</sup>	$I_O$	150	mA
Average Rectified Current	$I_O$	100	mA

Maximum Temperatures

Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to + 150	$^\circ\text{C}$

Thermal Resistance

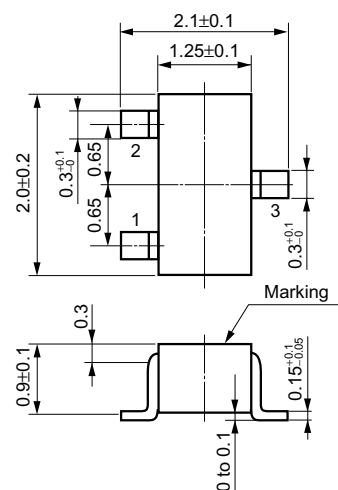
Junction to Ambient <sup>Note</sup>	$R_{th(j-a)}$	1.0	$^\circ\text{C/mW}$
Junction to Ambient	$R_{th(j-a)}$	0.85	$^\circ\text{C/mW}$

**Note** Both diodes loaded simultaneously.

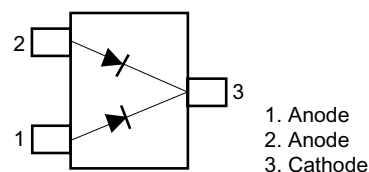
### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ )

CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_{F1}$	$I_F = 10$ mA		0.67	1.0	V
	$V_{F2}$	$I_F = 50$ mA		0.75	1.1	V
	$V_{F3}$	$I_F = 100$ mA		0.85	1.2	V
Reverse Current	$I_R$	$V_R = 50$ V			0.1	$\mu\text{A}$
Capacitance	$C_t$	$V_R = 0$ V, $f = 1.0$ MHz		1.1	4.0	pF
Reverse Recovery Time	$t_{rr}$	See Test Circuit.			3.0	ns

### PACKAGE DIMENSIONS (Unit: mm)



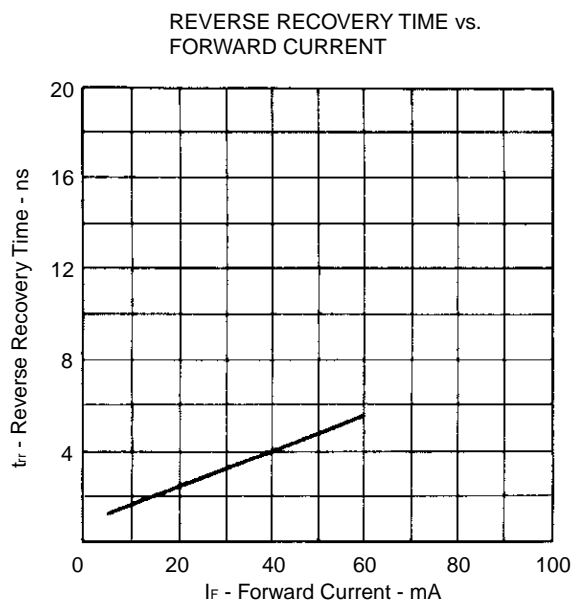
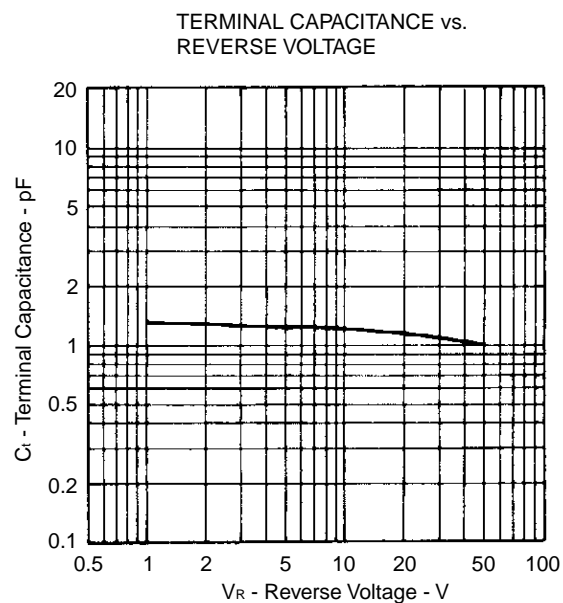
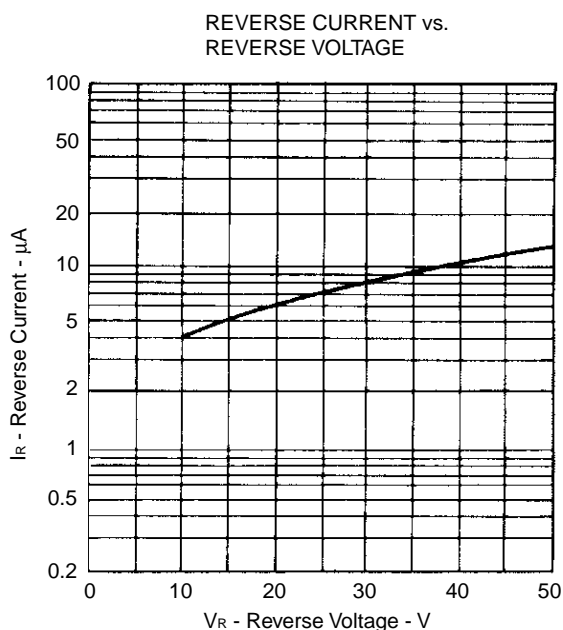
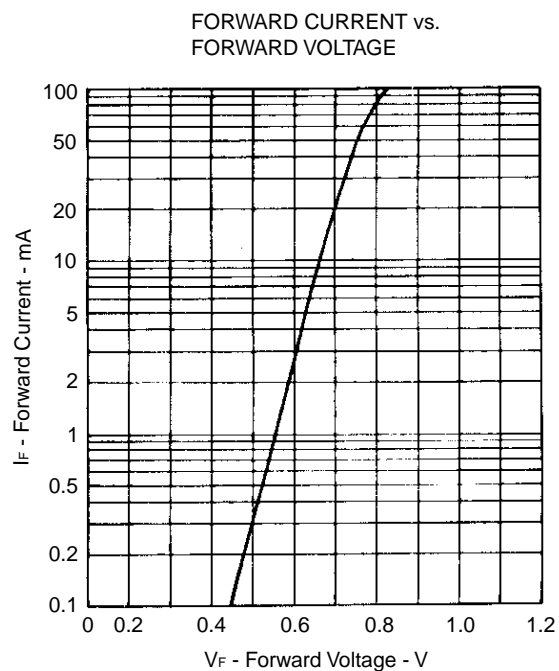
### CONNECTION DIAGRAM (Top View)



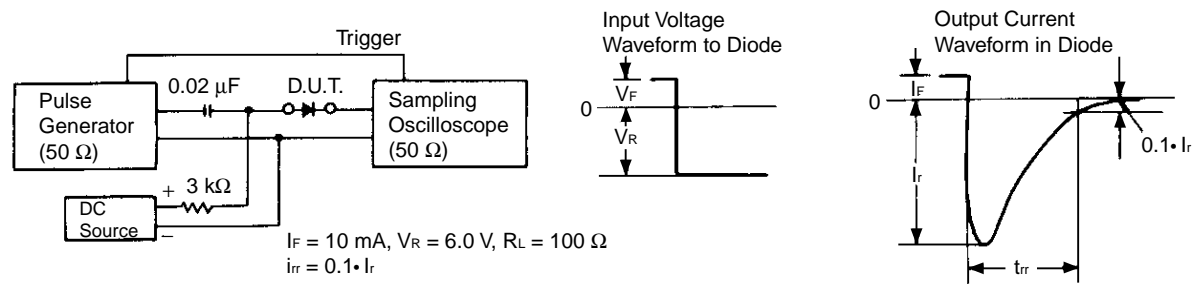
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TYPICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ )



# REVERSE RECOVERY TIME ( $t_{rr}$ ) TEST CIRCUIT



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