

HIGH-SPEED SWITCHING/SILICON EPITAXIAL TYPE
(COMMON CATHODE)

DESCRIPTION

The MC921 is a silicon epitaxial double diode employing small epoxy molded package.

It is designed for high-speed switching applications.

Owing to the small terminal capacitance and the short switching time (reverse recovery time), this diode usable not only for high-speed switching applications but also for protection, bias and other circuits.

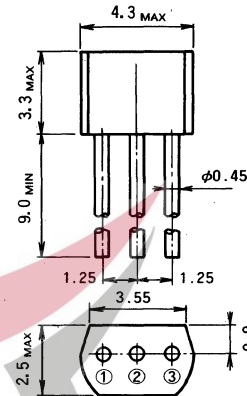
Moreover, this is small in size and double, it is suitable for high-density mounting applications.

FEATURES

- Small terminal capacitance
- High speed switching
- High voltage
- Double device and compact format reduce dimensions and enhance high-density mounting.

OUTLINE DRAWING

UNIT : mm



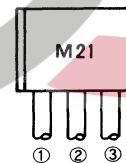
TERMINAL CONNECTIONS

- ① : ANODE 1
② : CATHODE(COMMON) EIAJ : —
③ : ANODE 2 JEDEC : —

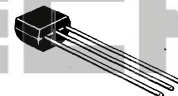
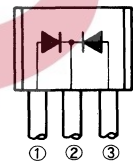
ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$)

Symbol	Parameter	Limits	Unit
V_{RM}	Peak reverse voltage	75	V
V_R	Reverse voltage	50	V
I_{FSM}	Forward surge current	4	A
I_{FM}	Peak forward current	300	mA
I_O	Average rectified current	100	mA
P_T	Power dissipation	300	mW
T_j	Junction temperature	+125	$^{\circ}\text{C}$
T_{stg}	Storage temperature	-55~+125	$^{\circ}\text{C}$

MARK



INTERNAL CONNECTIONS



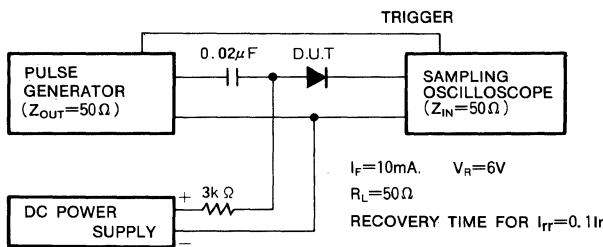
3-pin molded plastic SIL

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

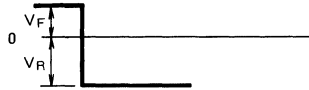
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V_{F1}	Forward voltage	$I_F=10\text{mA}$		0.72	0.9	V
V_{F2}	Forward voltage	$I_F=50\text{mA}$		0.85	1.0	V
V_{F3}	Forward voltage	$I_F=100\text{mA}$		0.9	1.2	V
I_R	Reverse current	$V_R=50\text{V}$			0.1	μA
C_t	Terminal capacitance	$V_R=0, f=1\text{MHz}$		1.0	4.0	pF
t_{rr}	Reverse recovery time	(See measurement circuit)			3.0	ns

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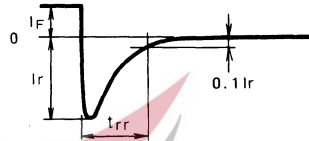
REVERSE RECOVERY TIME(T_{rr}) MEASUREMENT CIRCUIT



● INPUT VOLTAGE WAVEFORM

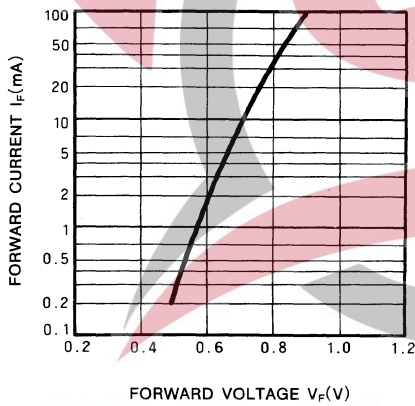


● WAVEFORM OF CURRENT FLOWING TO DIODE

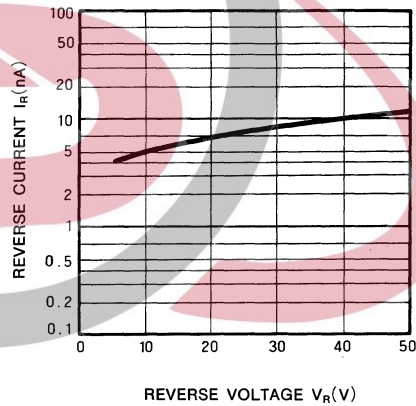


TYPICAL CHARACTERISTICS

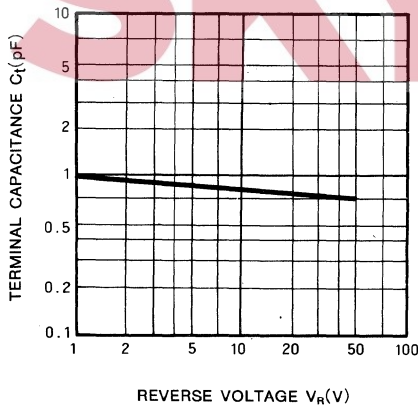
FORWARD CURRENT VS
FORWARD VOLTAGE



REVERSE CURRENT VS
REVERSE VOLTAGE



TERMINAL CAPACITANCE
VS REVERSE VOLTAGE



REVERSE RECOVERY TIME VS
FORWARD CURRENT

