

Plastic-Encapsulate Diodes

Ultra High Speed Switching Application

- Small package
- Low forward voltage : $V_F(3) = 0.97 \text{ V (typ.)}$
- Fast reverse recovery time: $t_{rr} = 1.6 \text{ ns (typ.)}$
- Small total capacitance : $C_T = 0.5 \text{ pF (typ.)}$

Marking: C3

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

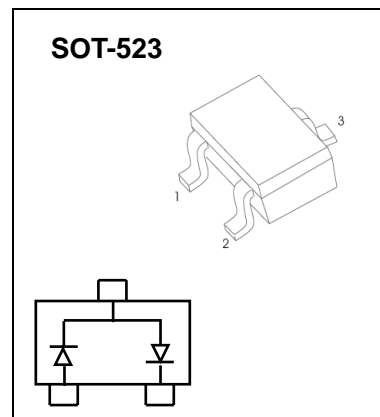
Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	V_{RM}	85	V
Reverse voltage	V_R	80	V
Maximum (peak) forward current	I_{FM}	240 *	mA
Average forward current	I_O	80 *	mA
Surge current (10ms)	I_{FSM}	1 *	A
Power dissipation	P_D (Note 1, 3)	120	mW
	P_D (Note 2)	100	
Junction temperature	T_J (Note 1)	150	$^\circ\text{C}$
	T_J (Note 2)	125	
Storage temperature	T_{stg} (Note 1)	-55 to 150	$^\circ\text{C}$
	T_{stg} (Note 2)	-55 to 125	

Note 1: For devices with the ordering part number ending in (TE85L,F).

Note 2: For devices with the ordering part number in other than (TE85L,F).

Note 3: Mounted on a FR4 board. (25.4 mm × 25.4 mm × 1.6 mm, Cu pad: $0.36 \text{ mm}^2 \times 3$)

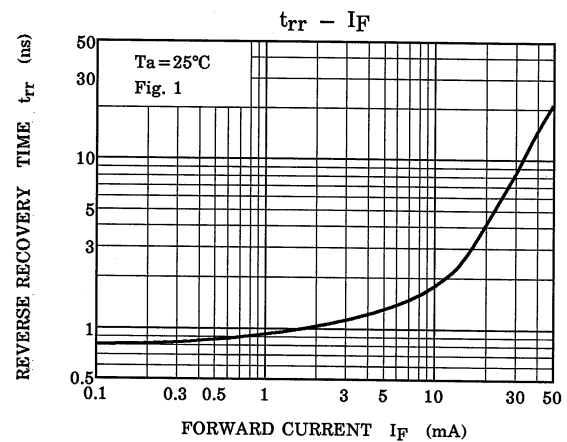
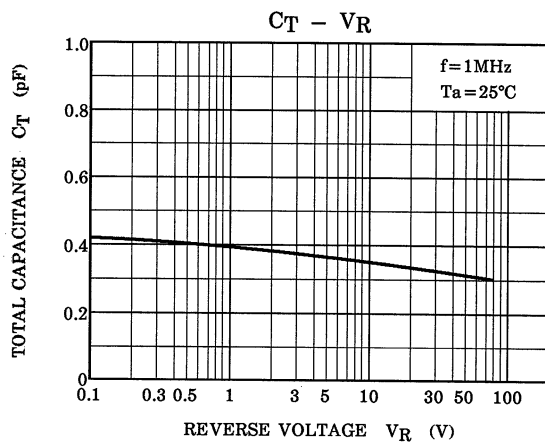
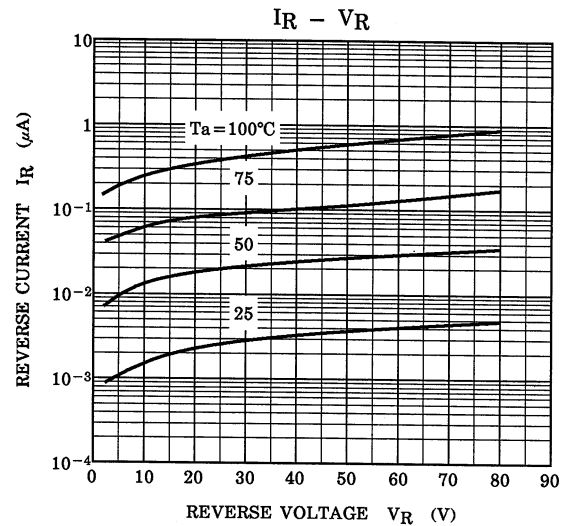
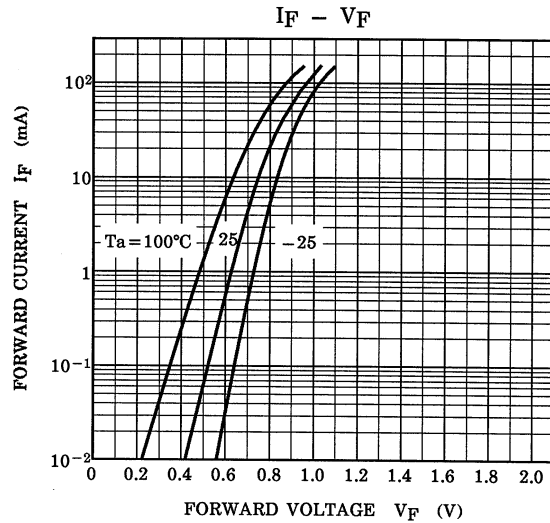
*: Unit rating. Total rating = Unit rating × 1.5.



Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	$I_F = 1 \text{ mA}$	—	0.63	—	V
	$V_F(2)$	$I_F = 10 \text{ mA}$	—	0.75	—	
	$V_F(3)$	$I_F = 100 \text{ mA}$	—	0.97	1.20	
Reverse current	$I_R(1)$	$V_R = 30 \text{ V}$	—	—	0.1	μA
	$I_R(2)$	$V_R = 80 \text{ V}$	—	—	0.5	
Total capacitance	C_T	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$	—	0.5	3.0	pF
Reverse recovery time	t_{rr}	$I_F = 10 \text{ mA}, \text{ Fig.1}$	—	1.6	4.0	ns

Typical Characteristics



The above characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.