

TYPES TID31 THRU TID37 SILICON SWITCHING DIODES

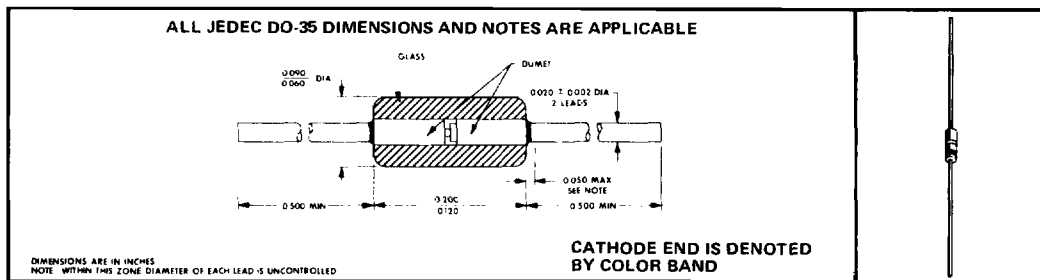
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FAST SWITCHING DIODES

- Rugged Double-Plug Construction

mechanical data

Double-plug construction affords integral positive contact by means of a thermal compression bond. Moisture-free stability is ensured through hermetic sealing. The coefficients of thermal expansion of the glass case and the dumet plugs are closely matched to allow extreme temperature excursions. Hot-solder-dipped leads are standard.



absolute maximum ratings at 25°C free-air temperature (unless otherwise noted)

		TID31	TID32	TID33	TID34	TID35	TID36	TID37	UNIT
$V_{RM}(wkg)$	Working Peak Reverse Voltage from -65°C to 150°C Free-Air Temperature (See Note 1)	50	75	50	75	50	75	50	v
I_O	Average Rectified Forward Current [See Note 1]	150	150	150	150	150	150	150	ma
I_F	Continuous Forward Current	225	225	225	225	225	225	225	ma
$I_{FM}(surge)$	Surge Current, One Second (See Note 2)	500	500	500	500	500	500	500	ma
$T_{A(oper)}$	Operating Free-Air Temperature Range	-65 to 150							°C
T_{stg}	Storage Temperature Range	-65 to 200							°C

electrical characteristics at 25°C free-air temperature (unless otherwise noted)

PARAMETER	TEST CONDITIONS	TID31	TID32	TID33	TID34	TID35	TID36	TID37	UNIT	LIMIT
$V_{(BR)}$ Reverse Breakdown Voltage	$I_R = 100 \mu a$	75	100	75	100	75	100	75	v	MIN
I_R Static Reverse Current	$V_R = 75 v$		5		5		5		μa	MAX
	$V_R = 50 v$	0.1	0.1	0.1	0.1	0.1	0.1	0.1	μa	MAX
	$V_R = 50 v, T_A = 150^\circ C$	100	100	100	100	100	100	100	μa	MAX
V_F Static Forward Voltage	$I_F = 100 ma$						1	1	v	MAX
	$I_F = 150 ma$				1	1			v	MAX
	$I_F = 200 ma$	1	1	1					v	MAX
C_T Total Capacitance	$V_R = 0, f = 1 Mc$	2.5	4	4	4	4	4	4	pf	MAX

switching characteristics at 25°C free-air temperature

PARAMETER	TEST CONDITIONS	TID31	TID32	TID33	TID34	TID35	TID36	TID37	UNIT	LIMIT
t_{rr} Reverse Recovery Time	$I_F = 200 ma, I_R = 200 ma, i_{rr} = 20 ma, R_L = 100 \Omega$	6	10	10	10	10	10	6	nsec	MAX

- NOTES: 1. These values may be applied continuously under single-phase, 60-cps, half-sine-wave operation with resistive load. Above 25°C, derate I_O and I_F linearly to 0 at 150°C free-air temperature.
2. These values apply for a one-second square-wave pulse with the device at nonoperating thermal equilibrium immediately prior to the surge.

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