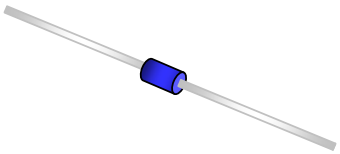
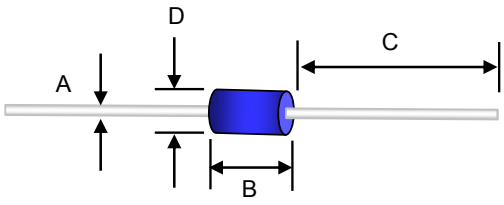
TAIWAN SEMICONDUCTOR

DB3-DB3TG
150mW Bi-directional Trigger Diode

Small Signal Diode

DO-35 Axial Lead
HERMETICALLY SEALED GLASS





Features

- ✧Designed for through-Hole Device Type Mounting.
- ✧Hermetically Sealed Glass.
- ✧All external suface are corrosion resistant and terminals are readily solderable.
- ✧High reliability glass passivation insuring parameter stability and protection against junction contamination.
- ✧Pb free version and RoHS compliant

Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	0.45	0.55	0.018	0.022
B	3.05	5.08	0.120	0.200
C	25.4	38.1	1.000	1.500
D	1.53	2.28	0.060	0.090

Mechanical Data

- ✧Case :DO-35 Solder Hot Dip Tin (Sn) lead finish
- ✧Terminal: Pure tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧High temperature soldering guaranteed: 260°C/10s
- ✧Marking : DB3/DB3TG
- ✧Weight : 0.1255 gram (approximately)

Ordering Information

Part No.	Package	Packing
DB3/DB3TG RI	DO-35	5Kpcs / 10" Reel

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number		Symbol	Value	Units
Power Dissipation		P_D	150	mW
Repetitive Peak Forward Current	Pulse Width= 20μsec	I_{FRM}	2	A
Thermal Resistance (Junction to Ambient)	(Note 1)	RθJA	400	°C/W
Junction and Storage Temperature Range		T_J, T_{STG}	-40 to + 125	°C

Electrical Characteristics

Type Number			Symbol	DB3	DB3TG	Units
Break-over Voltage	C=	22nF	V_{BO}	32	32	V
Break-over Voltage Symmetry	C=	22nF	+ / -V_{BO}	+ / - 3	+ / - 2	V
Break-over Current	C=	22nF	I_{BO}	100	15	nA
Maxiumn Leakage Current	V_R=	0.5V	I_R	10		μA
Junction Capacitance	V_R=0, f=1.0MHz		C_J	22.0		nF
Output Voltage			V_O	5		V
Reverse Recovery Time	(Note2)		Trr	1.5		μs

Notes:1. Valid provided that electrodes are kept at ambient temperature

Notes:2. Test Condition : I_F=0.5A, R_L=100Ω

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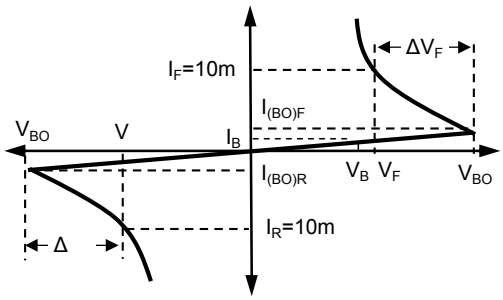
Rating and Sharacteristic Curves



V_{BO} :Break-Over Voltage at I_{BO}
I_{BO} : Test current for voltage V_{BO}
V_F : Dynamic impedance at I_F
I_B : Test current for voltage V_B
V_B : Voltage at current I_B
I_B : Test current for voltage V_B

FIG 1 Admissible Power Dissipation Curve

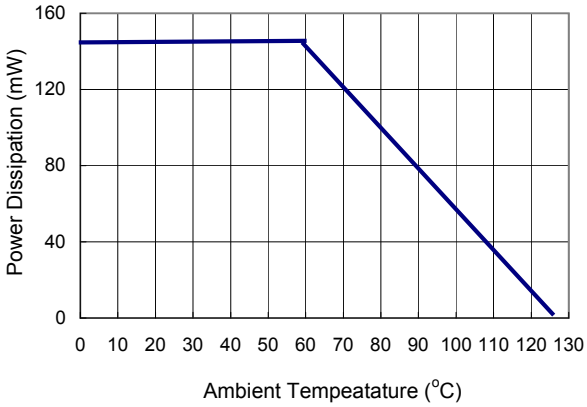


FIG 2 Typical Junction Capacitance

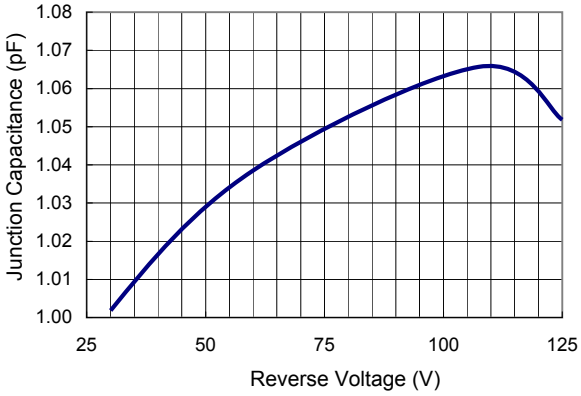


FIG 3 Peak pulse current versus duration