SWITCHING DIODES

GERMANIUM and GALLIUM ARSENIDE

GERMANIUM

Part Number	I_P (MA)	I_P tolerance (Max.)	V_P (mV) (Typ.)	V_F (mV) (Typ.)	C_t (Typ.)	(pF) (Max.)
155050G	5	5%	70	480	2	3
151050G	10	5%	80	500	3	5
152050G	20	5%	90	540	6	10
155100G	5	10%	70	480	2	3
151100G	10	10%	80	500	6	8
152100G	20	10%	90	540	15	20
155010G	50	10%	100	565	30	50
151010G	100	10%	110	575	60	100

CCI Tunnel Diodes are designed and characterized for low level, high speed switching applications. Featuring high $I_{P/C}$ ratios and subnano-second switching times. The Type 15 axial-lead, hermetically sealed package has been selected for easy circuit mounting and minimum space usage. Other package styles available upon request.

MAXIMUM RATINGS

- Operating Temperature −65°C to +100°C
- Storage Temperature −65°C to +100°C
- DC Current (mA)
  - Germanium 2 x Ip
  - Gallium Arsenide $\frac{C_J \text{ (PF)}}{2}$

GALLIUM ARSENIDE

Part Number	I_P (MA)	I_P tolerance (Max.)	V_P (mV) (Typ.)	V_FF (mV) (Typ.)	C_t (Typ.)	(pF) (Max.)
155050A	5	5%	135	1050	2	3
151050A	10	5%	155	1100	3	4
152050A	20	5%	175	1125	7	9
155100A	5	10%	135	1050	2	3
151100A	10	10%	155	1100	6	8
152100A	20	10%	175	1125	15	20
155010A	50	10%	195	1150	30	50
151010A	100	10%	205	1175	60	100

Typical Switching Speeds

Ge T.D. P/No.	t_s (Pico Sec.)	GaAs T.D. P/No.	t_s (Pico Sec.)
5050G	195	5050	595
1050G	170	1050A	400
2050G	200	2050A	405
5010G	330	5010A	625

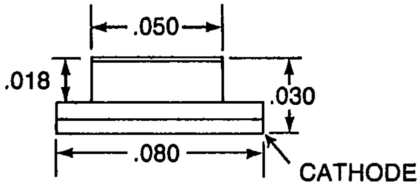
$$t_s \approx \frac{V_f - V_p}{I_p - I_v} C_t$$

Note: Faster switching speeds available upon request

OUTLINE DRAWINGS

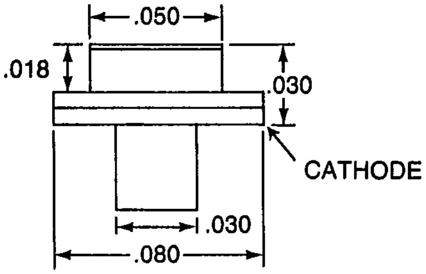
Type 10

$L_p = 0.1nH$
$C_p = .36pF$



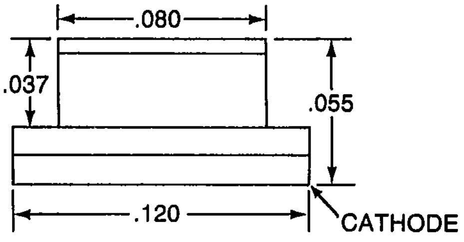
Type 11

$L_p = 0.1nH$
$C_p = .36pF$



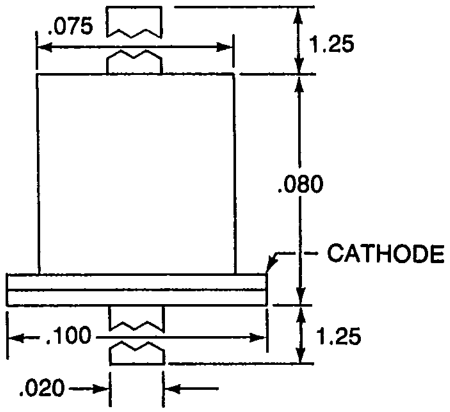
Type 13

$L_p = 0.3nH$
$C_p = .35pF$

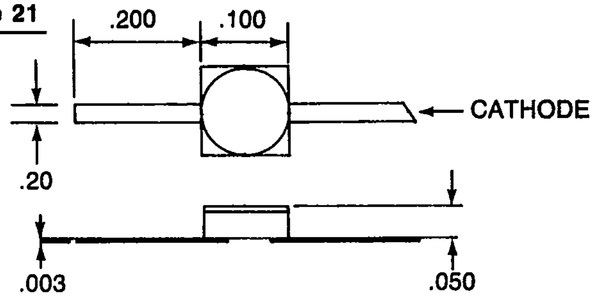


Type 15

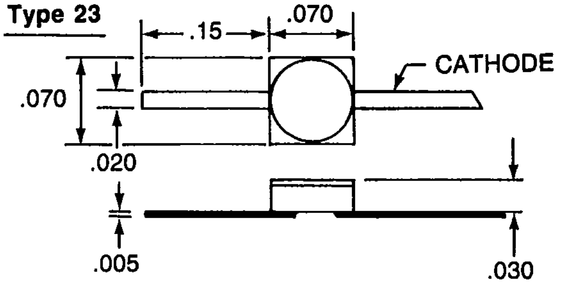
$L_p = 0.5nH$
$C_p = .45pF$



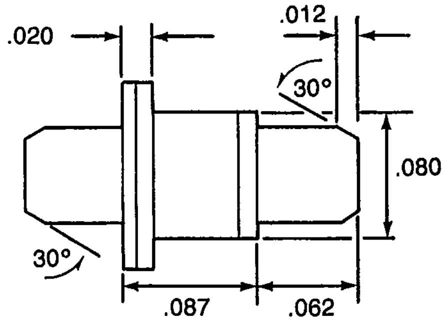
Type 21



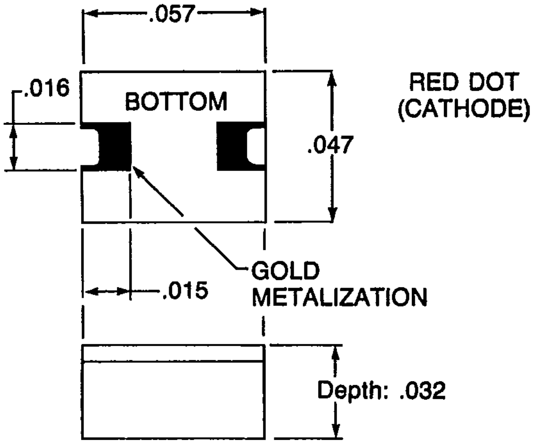
Type 23



Type 25



Type 28



NOTE:
Use package number as prefix to part number, i.e. 23HR400BD

All Dimensions In Inches