

Order code	Manufacturer code	Description
47-2600	n/a	CURRENT REGULATOR DIODE - 1.5MA
47-2602	n/a	CURRENT REGULATOR DIODE - 2.0MA
47-2604	n/a	CURRENT REGULATOR DIODE - 2.7MA
47-2606	n/a	CURRENT REGULATOR DIODE - 3.5MA
47-2608	n/a	CURRENT REGULATOR DIODE - 4.5MA
47-2610	n/a	CURRENT REGULATOR DIODE - 5.6MA
47-2630	n/a	CURRENT REGULATOR DIODE - 1.5MA SMT
47-2632	n/a	CURRENT REGULATOR DIODE - 2.0MA SMT
47-2634	n/a	CURRENT REGULATOR DIODE - 2.7MA SMT
47-2636	n/a	CURRENT REGULATOR DIODE - 3.5MA SMT
47-2638	n/a	CURRENT REGULATOR DIODE - 4.5MA SMT
47-2640	n/a	CURRENT REGULATOR DIODE - 5.6MA SMT

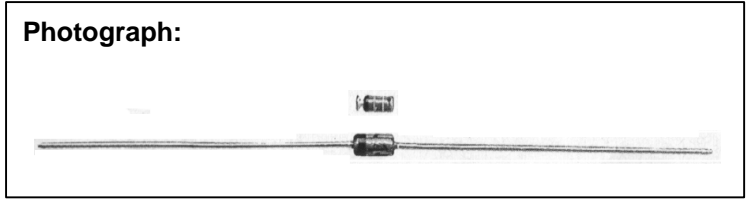
	Page 1 of 4
The enclosed information is believed to be correct, Information may change 'without notice' due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 04/07/2003

Current Regulating Diodes

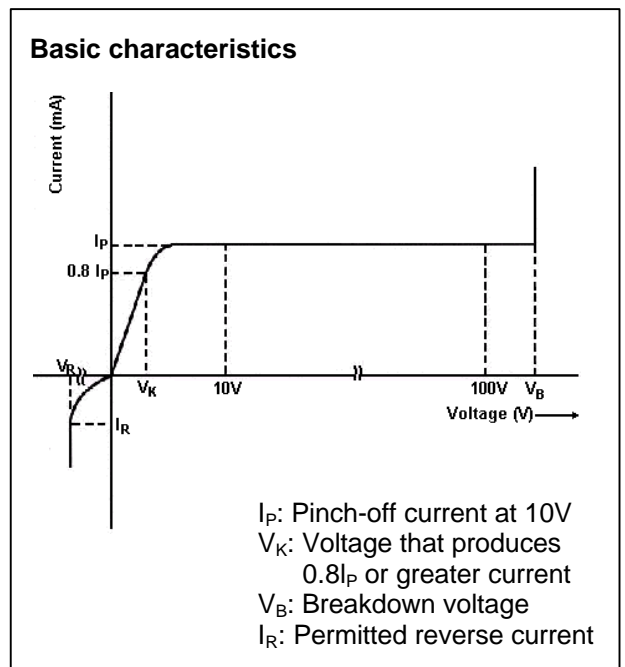
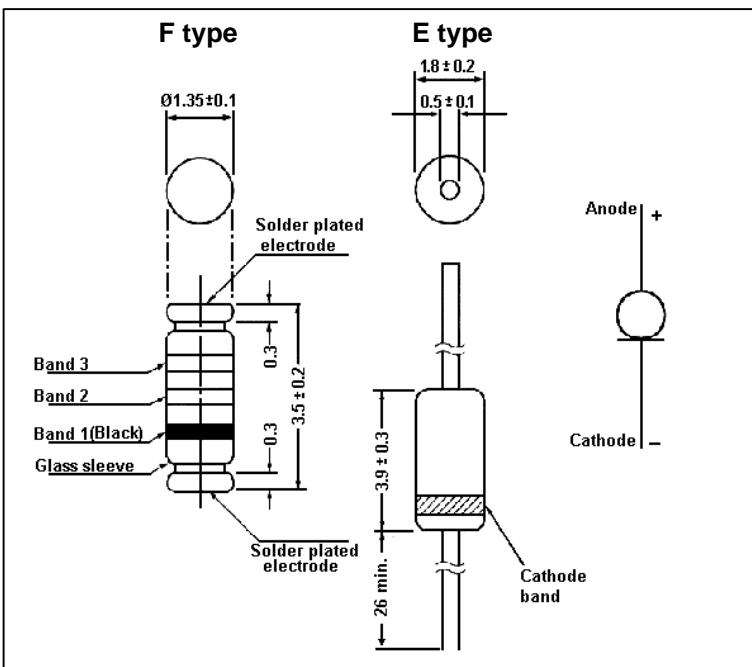
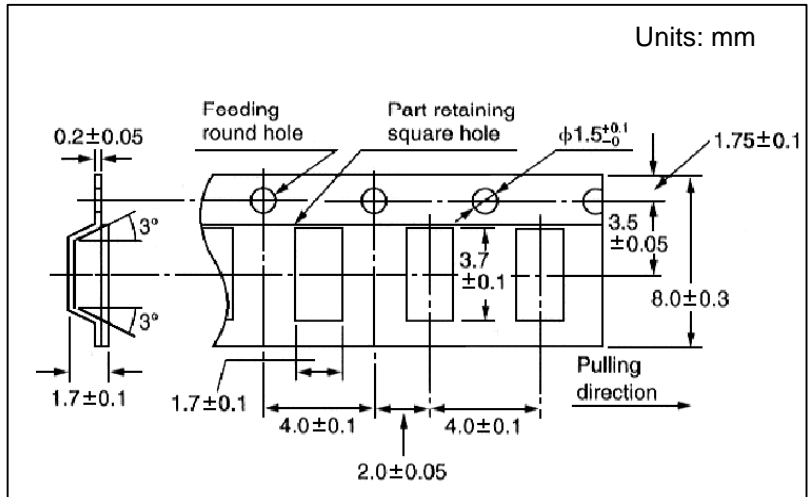
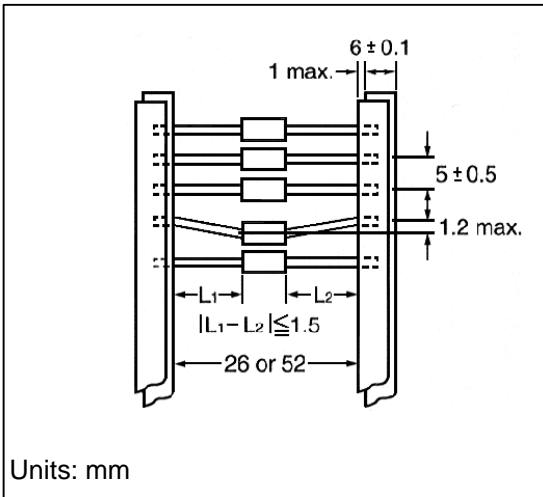
ATC Semitec – CRD current regulative diode

CRD is a diode that supplies constant current to an electronic circuit, even when power supply voltage fluctuations or load impedance fluctuations occur. CRD is used for current stabilisation and current limiting.

Maximum ratings		
	E-type	F-type
Rating power	300mW	400mW
Thermal resistance:	300°C/W	150°C/W
Reverse current:	50mA	
Operating temp:	-30°C ~ 150°C	



Maximum rating voltage	
Part No.	Voltage
E101L~E-562	100V
F101L~F-562	100V

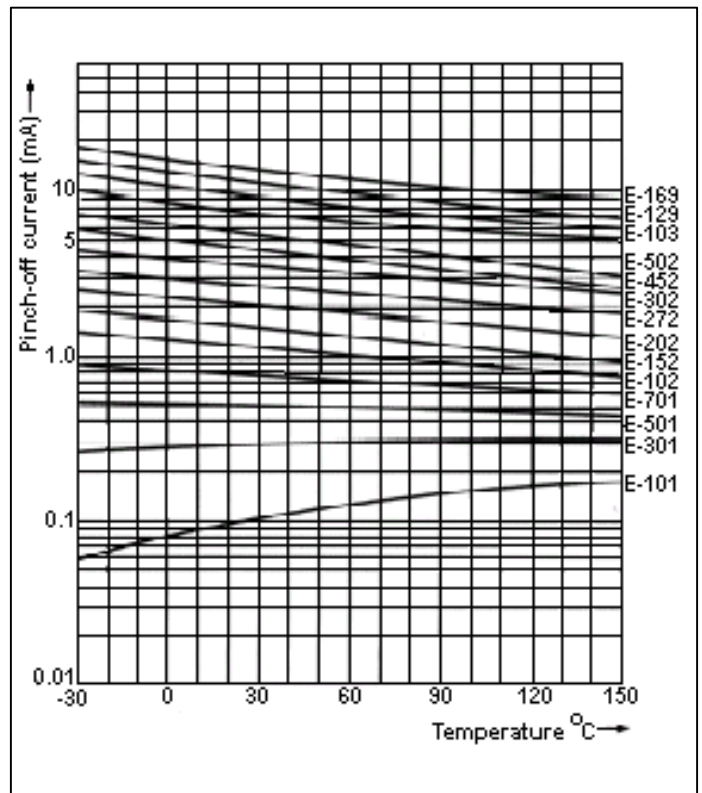
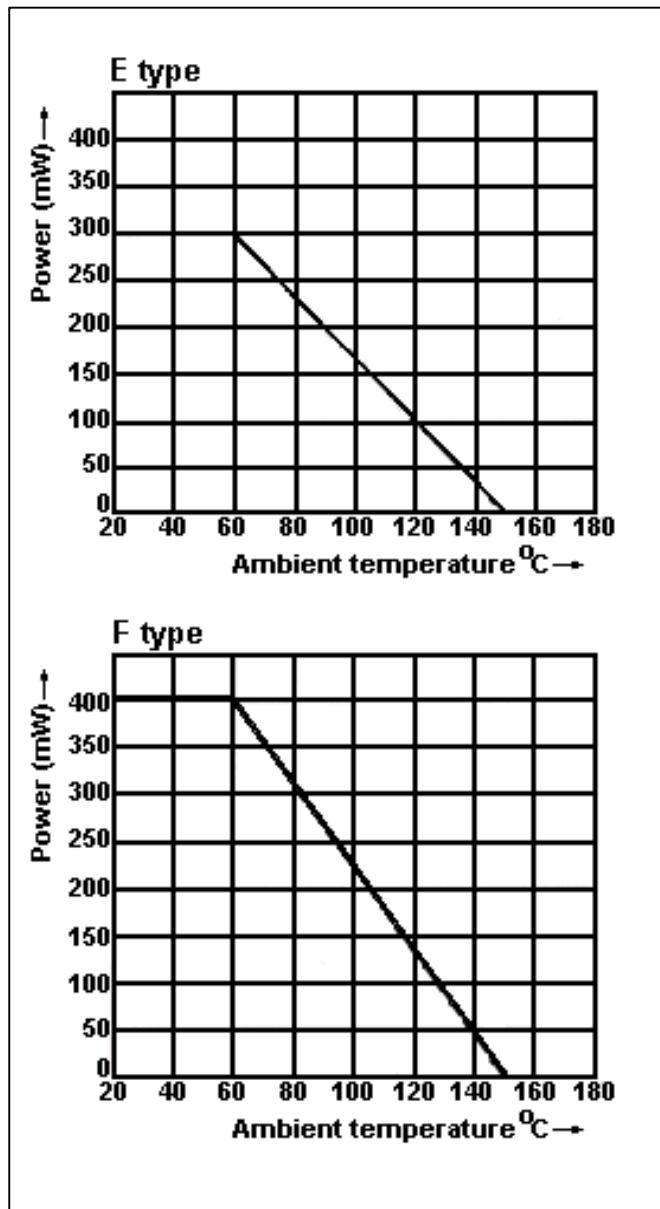


Specifications:

Ref No.	Pinch-off current		Limiting current		Dynamic impedance Z_1 ($M\Omega$)	Limiting current ratio $100V/I_P$ $30V/I_P$	Temperature coefficient (%/°C)	F type		E type
	Test voltage	I_P (mA)	V_K (V)	I_K (mA)				Band 2	Band 3	
E-152	10V	1.28~1.72	2.0	0.8lp min.	0.40	1.1 max.	-0.13~-0.40	-	-	15
E-202		1.68~2.32	2.3		0.25		-0.15~-0.42	-	-	20
E-272		2.28~3.10	2.7		0.15		-0.18~-0.45	-	-	27
E-352		3.00~4.10	3.2		0.10		-0.20~-0.47	-	-	35
E-452		3.90~5.10	3.7		0.07		-0.22~-0.50	-	-	45
E-562		5.00~6.50	4.5		0.04		-0.25~-0.53	-	-	56
F-152	10V	1.28~1.72	2.0	0.8lp min.	0.40	1.1 max.	-0.13~-0.40	Yellow green	Orange	-
F-202		1.68~2.32	2.3		0.25		-0.13~-0.40		Yellow green	-
F-272		2.28~3.10	2.7		0.15		-0.18~-0.45		Light blue	-
F-352		3.00~4.10	3.2		0.10		-0.20~-0.47		Blue	-
F-452		3.90~5.10	3.7		0.07		-0.22~-0.50		Purple	-
F-562		5.00~6.50	4.5		0.04		-0.25~-0.53		White	-

Power derating:

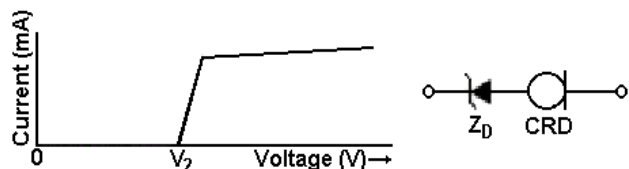
Pinch-off current:



CRD in parallel:

The use of CRD in parallel increases their current handling capabilities.

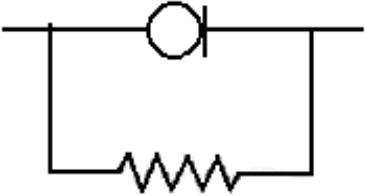
Increasing the voltage range using a zener diode:
Connecting zener diodes in series with the line ensures that the current is constant in high voltage area.



The compensation of current reduction due to self heating:

Placing resistors in parallel with CRD can correct any current decrease when the applied voltage increases. The following values are typical for correction resistors:

E-102: 1M Ω	E-352: 82k Ω
E-152: 390k Ω	E-452: 56k Ω
E-202: 240k Ω	E-562: 39k Ω
E-272: 120k Ω	



A resistor may not be necessary if the current value is less than 1 mA.

