

Thyristors and Triggers

Motorola's extensive line of thyristors consists of two generic component categories — SCRs and Triacs. Within each of these categories are two basic packaging divisions, plastic and metal — plastic for lowest cost and metal hermetically sealed packages for applications requiring highest reliability. Combined, these divisions include a large number of individual devices covering a forward-current range from 0.8 to 80 Amperes and a blocking voltage range from 15 to 800 Volts.

But the availability of devices for a wide range of current and voltage requirements doesn't begin to tell the whole story. For within the large selection of different series numbers are device families with characteristics designed for specifically designated applications. Here are some examples of preferred device families for the more high-volume applications, and for special unique purposes.

Thyristor Devices

SCRs in Plastic Packages

Excellent reliability and low cost make Motorola plastic-packaged thyristors the preferred devices for high-volume, low and medium current applications. Batch-processed, high-impact plastic provides outstanding mechanical ruggedness while oxide or glass surface passivation protects each die against impurity contamination and moisture penetration for long-term electrical stability.

ON-STATE (RMS) CURRENT		0.8 Amp	4.0 Amp		8.0 Amp	12 Amp – 16 Amp			
		Case 29-02 TO-92 Style 10	Case 77-03 Style 2		Case 90-05 Style 1	Case 221-02 TO-220 AB Style 1			
V _{DRM} V _{RRM} Blocking Voltage (DC or peak) Volts	15	MCR101	MCR106-1	MCR107-1	MCR3000-1	2N6394	2N6400		
	25	MCR102 2N5060			2N4441 MCR3000-2				
	30								
	50	MCR103 2N5061 MCR104 2N5062 MCR115 2N5063 MCR120 2N5064	MCR106-2	MCR107-2	MCR3000-3	2N6395	2N6401		
	60		MCR106-3	MCR107-3					
	100								
	150		MCR106-4	MCR107-4	2N4442 MCR3000-4	2N6396	2N6402		
	200				MCR106-5 MCR106-6			MCR107-5 MCR107-6	MCR3000-5 2N4443 MCR3000-6
	300								
	400		MCR106-7 MCR106-8	MCR107-7 MCR107-8	MCR3000-7 2N4444 MCR3000-8	MCR220-7 2N6398	MCR221-7 2N6404		
	500	MCR106-9 MCR106-10			MCR107-9 MCR107-10			MCR3000-9 MCR3000-10	
	600								
700			MCR220-9	MCR221-9					
800			2N6399	2N6405					

ELECTRICAL CHARACTERISTICS

I _{TSM} (Amp)	6.0	25	25	80	100	160
I _{GT} @ 25°C (mA) Max.	0.2	0.2	20	30	30	30
V _{GT} @ 25°C (V) Max.	0.8	1.0	1.5	1.5	1.5	1.5
I _H @ 25°C (mA) Max.	5.0	5.0	20	40	40	40