

2N3537-2N4097

THYRISTOR INDEX (continued)

TYPE	REPLACEMENT	PAGE NUMBER	I_f A	V_{FOM}/V_{ROM} V	T_J °C	I_{GT} mA	V_{GT} V
2N3537			400	700	125	300	4.0
2N3538			400	800	125	300	4.0
2N3539			400	900	125	300	4.0
2N3540			400	1000	125	300	4.0
2N3541			400	1200	125	300	4.0
2N3555			1.6	30	150	0.020	0.7
2N3556			1.6	60	150	0.020	0.7
2N3557			1.6	100	150	0.020	0.7
2N3558			1.6	200	150	0.020	0.7
2N3559			1.6	30	150	0.20	0.8
2N3560			1.6	60	150	0.20	0.8
2N3561			1.6	100	150	0.20	0.8
2N3562			1.6	200	150	0.20	0.8
2N3649			16	50	120	180	3.0
2N3650			16	100	120	180	3.0
2N3651			16	200	120	180	3.0
2N3652			16	300	120	180	3.0
2N3653			16	400	120	180	3.0
2N3654			16	50	120	180	3.0
2N3655			16	100	120	180	3.0
2N3656			16	200	120	180	3.0
2N3657			16	300	120	180	3.0
2N3658			16	400	120	180	3.0
2N3668	MCR649P-3	4-46	13	100	100	40	2.0
2N3669	MCR649P-4	4-46	13	200	100	40	2.0
2N3670	MCR649P-6	4-46	13	400	100	40	2.0
2N3753			7.5	50	120	100	3.0
2N3754			7.5	100	120	100	3.0
2N3755			7.5	200	120	100	3.0
2N3756			7.5	300	120	100	3.0
2N3757			7.5	400	120	100	3.0
2N3758			7.5	500	120	100	3.0
2N3759			7.5	600	120	100	3.0
2N3760			7.5	700	120	100	3.0
2N3761			7.5	800	120	100	3.0
2N3870			22	100	100	40	2.0
2N3871	MCR2835-3	4-60	22	200	100	40	2.0
2N3872	MCR2835-4	4-60	22	400	100	40	2.0
2N3873	MCR2835-6	4-60	22	600	100	40	2.0
2N3884	MCR2835-8	4-60	175	50	125	300	4.0
2N3885			175	100	125	300	4.0
2N3886			175	200	125	300	4.0
2N3887			175	300	125	300	4.0
2N3888			175	400	125	300	4.0
2N3889			175	500	125	300	4.0
2N3890			175	600	125	300	4.0
2N3891			175	700	125	300	4.0
2N3892			175	800	125	300	4.0
2N3893			175	900	125	300	4.0
2N3894			175	1000	125	300	4.0
2N3895			175	1200	125	300	4.0
2N3896	MCR2935-3	4-60	22	100	100	40	2.0
2N3897	MCR2935-4	4-60	22	200	100	40	2.0
2N3898	MCR2935-6	4-60	22	400	100	40	2.0
2N3899	MCR2935-8	4-60	22	600	100	40	2.0
2N3936			7.0	100	125	60	3.2
2N3937			7.0	200	125	60	3.2
2N3938			7.0	300	125	60	3.2
2N3939			7.0	400	125	60	3.2
2N3940			7.0	500	125	60	3.2
2N3986			70	500	125	150	3.0
2N3987			70	600	125	150	3.0
2N3988			70	700	125	150	3.0
2N3989			70	800	125	150	3.0
2N3990			70	900	125	150	3.0
2N3991			70	1000	125	150	3.0
2N3992			70	1100	125	150	3.0
2N4096			0.2	50	125	0.2	0.8
2N4097			0.2	100	125	0.2	0.8

2N3724, 2N3725 — 2N4013, 2N4014 (continued)

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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ON CHARACTERISTICS (continued)

Collector-Emitter Saturation Voltage* ($I_C = 10\text{ mAdc}$, $I_B = 1.0\text{ mAdc}$)	2N3724, 2N4013 2N3725, 2N4014 2N3724, 2N4013 2N3725, 2N4014 2N3724, 2N4013 2N3725, 2N4014 2N3724, 2N4013 2N3725, 2N4014	$V_{CE(sat)}$ *	-	0.25	Vdc
($I_C = 100\text{ mAdc}$, $I_B = 10\text{ mAdc}$)			-	0.20	
($I_C = 300\text{ mAdc}$, $I_B = 30\text{ mAdc}$)			-	0.26	
($I_C = 500\text{ mAdc}$, $I_B = 50\text{ mAdc}$)			-	0.32	
($I_C = 800\text{ mAdc}$, $I_B = 80\text{ mAdc}$)			-	0.40	
($I_C = 1.0\text{ Adc}$, $I_B = 100\text{ mAdc}$)			-	0.42	
($I_C = 1.0\text{ Adc}$, $I_B = 100\text{ mAdc}$)			-	0.52	
Base-Emitter Saturation Voltage* ($I_C = 10\text{ mAdc}$, $I_B = 1.0\text{ mAdc}$)	2N3724, 2N4013 2N3725, 2N4014 2N3724, 2N4013 2N3725, 2N4014 2N3724, 2N4013 2N3725, 2N4014 2N3724, 2N4013 2N3725, 2N4014	$V_{BE(sat)}$ *	-	0.76	Vdc
($I_C = 100\text{ mAdc}$, $I_B = 10\text{ mAdc}$)			-	0.86	
($I_C = 300\text{ mAdc}$, $I_B = 30\text{ mAdc}$)			-	1.1	
($I_C = 500\text{ mAdc}$, $I_B = 50\text{ mAdc}$)			0.9	1.2	
($I_C = 800\text{ mAdc}$, $I_B = 80\text{ mAdc}$)			-	1.5	
($I_C = 1.0\text{ Adc}$, $I_B = 100\text{ mAdc}$)			-	1.7	
($I_C = 1.0\text{ Adc}$, $I_B = 100\text{ mAdc}$)			-	0.95	

SMALL-SIGNAL CHARACTERISTICS

Current-Gain-Bandwidth Product ($I_C = 50\text{ mAdc}$, $V_{CE} = 10\text{ Vdc}$, $f = 100\text{ MHz}$)	f_T	300	-	MHz
Output Capacitance ($V_{CB} = 10\text{ Vdc}$, $I_E = 0$, $f = 140\text{ kHz}$)	C_{ob}	-	12	pF
		-	10	
Input Capacitance ($V_{BE} = 0.5\text{ Vdc}$, $I_C = 0$, $f = 140\text{ kHz}$)	C_{ib}	-	55	pF

SWITCHING CHARACTERISTICS

Turn-On Time	$(V_{CC} = 30\text{ Vdc}$, $V_{BE(off)} = 3.8\text{ Vdc}$, $I_C = 500\text{ mAdc}$, $I_{B1} = 50\text{ mAdc}$) (See Figure 1)	t_{on}	-	35	ns
Delay Time		t_d	-	10	ns
Rise Time		t_r	-	30	ns
Turn-Off Time	$(V_{CC} = 30\text{ Vdc}$, $I_C = 500\text{ mAdc}$, $I_{B1} = I_{B2} = 50\text{ mAdc}$) (See Figure 1)	t_{off}	-	60	ns
Storage Time		t_s	-	50	ns
Fall Time		t_f	-	25	ns
				30	ns

* Pulse Test: Pulse Width = 300 μs , Duty Cycle = 1.0%.

FIGURE 1 — SWITCHING TIMES TEST CIRCUIT

