PNP SWITCHING SILICON TRANSISTOR
Qualified per MIL-PRF-19500/396

Devices				*Qualified Level*
2N3762	**2N3763**	**2N3764**	**2N3765**	**JAN**
2N3762L	**2N3763L**			**JANTX**
				JANTXV

MAXIMUM RATINGS

Ratings	Symbol	2N3762* 2N3764	2N3763* 2N3765	Unit
Collector-Emitter Voltage	V_{CEO}	40	60	Vdc
Collector-Base Voltage	V_{CBO}	40	60	Vdc
Emitter-Base Voltage	V_{EBO}	5.0		Vdc
Collector Current	I_C	1.5		Adc
		2N3762*[1] 2N3763*	2N3764[2] 2N3765	
Total Power Dissipation @ $T_A = +25^0$C	P_T	1.0	0.5	W
Operating & Storage Junction Temp. Range	T_{op}, T_{stg}	-55 to +200		^{0}C

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max.		Unit
		2N3762* 2N3763*	2N3764 2N3765	
Thermal Resistance Junction-to-Case	$R_{\theta JC}$	60	88	^{0}C/W

*Electrical characteristics for "L" suffix devices are identical to the "non L" corresponding devices
1) Derate linearly at 5.71 mW/^{0}C for $T_A > +25^0$C
2) Derate linearly at 2.86 mW/^{0}C for $T_A > +25^0$C

TO-39* (TO-205AD)
2N3762, 2N3763

TO-5*
2N3762L, 2N3763L

TO-46* (TO-206AB)
2N3764, 2N3765
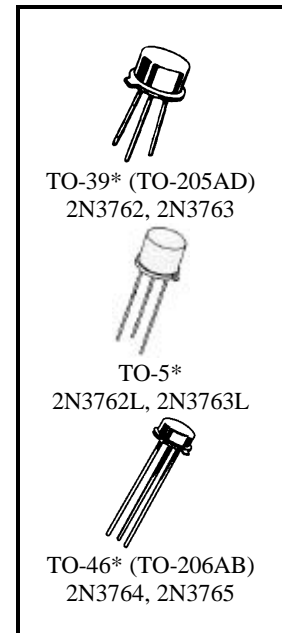
*See appendix A for package outline

ELECTRICAL CHARACTERISTICS ($T_A = 25^0$C unless otherwise noted)

Characteristics		Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Current I_C = 10 mAdc	2N3762, 2N3764	$V_{(BR)CEO}$	40		Vdc
	2N3763, 2N3765		60		
Collector-Base Cutoff Current					
V_{CB} = 20 Vdc	2N3762, 2N3764	I_{CBO}		100	ηAdc
V_{CB} = 30 Vdc	2N3763, 2N3765			100	μAdc
V_{CB} = 40 Vdc	2N3762, 2N3764			10	
V_{CB} = 60 Vdc	2N3763, 2N3765			10	

ELECTRICAL CHARACTERISTICS (con't)

Characteristics		Symbol	Min.	Max.	Unit
Collector-Emitter Cutoff Current		I_{CEX}			ηAdc
V_{EB} = 2.0 Vdc, V_{CE} = 20 Vdc	2N3762, 2N3764			100	
V_{EB} = 2.0 Vdc, V_{CE} = 30 Vdc	2N3763, 2N3765			100	
Emitter-Base Cutoff Current		I_{EBO}			
V_{EB} = 2.0 Vdc	All Types			200	ηAdc
V_{EB} = 5.0 Vdc	2N3762, 2N3764			10	μAdc
	2N3763, 2N3765			10	

ON CHARACTERISTICS (3)

Characteristics		Symbol	Min.	Max.	Unit
Forward-Current Transfer Ratio		h_{FE}			
I_C = 10 mAdc, V_{CE} = 1.0 Vdc			35		
I_C = 150 mAdc, V_{CE} = 1.0 Vdc			40		
I_C = 500 mAdc, V_{CE} = 1.0 Vdc			40	140	
I_C = 1.0 Adc, V_{CE} = 1.5 Vdc	2N3762, 2N3764		30	120	
	2N3763, 2N3765		20	80	
I_C = 1.5 Adc, V_{CE} = 5.0 Vdc	2N3762, 2N3764		30		
	2N3763, 2N3765		20		
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$			Vdc
I_C = 10 mAdc, I_B = 1.0 mAdc				0.1	
I_C = 150 m Adc, I_B = 15 mAdc				0.22	
I_C = 500 mAdc, I_B = 50 mAdc				0.5	
I_C = 1.0 Adc, I_B = 100 mAdc				0.9	
Base-Emitter Saturation Voltage		$V_{BE(sat)}$			Vdc
I_C = 10 mAdc, I_B = 1.0 mAdc				0.8	
I_C = 150 m Adc, I_B = 15 mAdc				1.0	
I_C = 500 mAdc, I_B = 50 mAdc				1.2	
I_C = 1.0 Adc, I_B = 100 mAdc			0.9	1.4	

DYNAMIC CHARACTERISTICS

Characteristics		Symbol	Min.	Max.	Unit
Forward Current Transfer Ratio, Magnitude		$\left| h_{fe} \right|$			
I_C = 50 mAdc, V_{CE} = 10 Vdc, f = 100 MHz	2N3762, 2N3764		1.8	6.0	
	2N3763, 2N3765		1.5	6.0	
Output Capacitance		C_{obo}		25	pF
V_{CB} = 10 Vdc, I_E = 0, 100 kHz $\leq$ f $\leq$ 1.0 MHz					
Input Capacitance		C_{ibo}		80	pF
V_{EB} = 0.5 Vdc, I_C = 0, 100 kHz $\leq$ f $\leq$ 1.0 MHz					

SWITCHING CHARACTERISTICS

		Symbol	Min.	Max.	Unit
Delay Time	V_{CC} = 30 Vdc, V_{EB} = 0,	t_d		8.0	ηs
Rise Time	I_C = 1.0 mAdc, I_{B1} = 100 mAdc	t_r		35	ηs
Storage Time	V_{CC} = 30 Vdc, V_{EB} = 0,	t_s		80	ηs
Fall Time	I_C = 1.0 mAdc, I_{B1} = 100 mAdc	t_f		35	ηs

(3) Pulse Test: Pulse Width = 300μs, Duty Cycle $\leq$ 2.0%.

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