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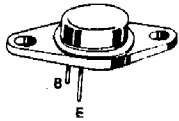
SILICON PLANAR NPN  
 POWER TRANSISTOR

Absolute Maximum Ratings

Collector-Base Voltage	120V
Collector-Emitter Voltage	90V
Emitter-Base Voltage	7V
D.C. Collector Current	7A
Power Dissipation at 100°C Case Temperature	20W

Operating and Storage Temperature Range -65 to +200°C

Case TO 66



Electrical Specifications (at 25°C unless noted)

Test	Symbol			Units	Test Conditions	
		Min.	Max.			
D.C. Pulse current gain	$h_{FE}$	40	—	—	$I_C=0.5A, V_{CE}=5V$	
D.C. Pulse current gain (Note 1)	$h_{FE}$	20	80	—	$I_C=4A, V_{CE}=5V$	
D.C. Pulse current gain (Note 1)	$h_{FE}$	12	—	—	$I_C=4A, V_{CE}=2V$	
Collector saturation voltage (Note 1)	$V_{CE}(sat)$	—	1	V	$I_C=4A, I_B=400mA$	
Base-emitter voltage (Note 1)	$V_{BE}$	—	2	V	$I_C=4A, V_{CE}=2V$	
Collector-emitter sustaining voltage	$V_{CE}(sus)$	75	—	V	$I_C=200mA, I_B=0$ (pulse test)	
Collector-emitter sustaining voltage	$V_{CE}(sus)$	90	—	V	$I_C=200mA, I_B=0, R_{th}=50\Omega$ (pulse test)	
Emitter-base breakdown voltage	$BV_{EBO}$	7	—	V	$I_C=10mA, I_E=0$	
Collector cutoff current	$I_{CIX}$	—	4	mA	$V_{CE}=100V, V_{BE}=-1.5V$	
Collector cutoff current, 150°C	$I_{CIX}$	—	4	mA	$V_{CE}=100V, V_{BE}=-1.5V$	
Emitter-base cutoff current	$I_{EBO}$	—	2	mA	$V_{BE}=4V, I_C=0$	
Emitter-collector cutoff current	$I_{CEO}$	—	5	mA	$V_{CE}=40V, I_B=0$	
Collector capacitance	$C_{ob}$	—	175	$\mu f$	$V_{BE}=10V, I_C=0, f=10mHz$	
Gain-bandwidth product	$f_t$	40	—	mHz	$I_C=500mA, V_{CE}=10V, f=10mHz$	
Switching speeds	Delay time	$t_d$	—	40	nsec	$I_C=4A, V_{CE}=30V$ $I_{B1}=-I_{B2}=400mA$
	Rise time	$t_r$	—	400	nsec	
	Storage time	$t_s$	—	800	nsec	
	Fall time	$t_f$	—	400	nsec	



Quality Semi-Conductors