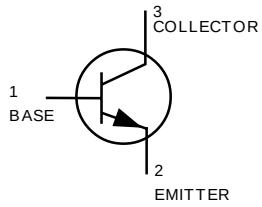
General Purpose Transistors

BC817-16WT1

NPN Silicon

BC817-40YLT1 is LRC Preferred Device



CASE 419-02, STYLE 2
SOT-323 (SC-70)

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	45	V
Collector-Base Voltage	V_{CBO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector current-continuoun	I_C	500	mAdc

THERMAL CHARATEERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, (1)	P_D		
T_A=25°C		225	mW
Derate above 25°C		1.8	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation	P_D		
Alumina Substrate, (2) TA=25 °C		300	mW
Derate above 25°C		2.4	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction and Storage Temperature	T_j ,T_{stg}	-55 to +150	°C

DEVICE MARKING

BC817-16WT1=6A

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage (1) (I_C=10mA)	$V_{(BR)CEO}$	45	-	-	V
Collector-Emitter Breakdown Voltage (I_C=10μ A)	$V_{(BR)CES}$	50			
Emitter-Base Breakdown Voltage (I_E=10μ A)	$V_{(BR)EBO}$	5	-	-	V
Collector Cutoff Current (V_{CB}=30V)	I_{CBO}	-	-	100	nA
Emitter Cutoff Current (V_{BE}=7V)	I_{EBO}			100	nA

ON CHARACTERISTICS

DC Current Gain (1) (I_C=100mA, V_{CE}=1.0V)	H_{fe1}	100	-	250	
DC Current Gain (1) (I_C=500mA, V_{CE}=1.0V)	H_{fe2}	40	-	-	
Collector-Emitter Saturation Voltage (1) (I_C=500mA,I_B=50mA)	$V_{CE(SAT)}$	-	-	0.7	V
Base-Emitter On Voltage (1) I_C=300mA,V_{CE}=1.0V)	$V_{BE(ON)}$	-	-	1.2	V

SMALL-SIGNAL CHARACTERISTICS

Current-Gain-Bandwidth Product (I_C =10mA, V_{CE} =Vdc, f =100MHz)	f_T	100	–	–	MHz
Output Capacitance (V_{CB}=10V, f =1.0MHz)	C_{obo}	–	10	–	pF

(1) Note: Pulse width≤300μSec.,Duty cycle≤2.0%