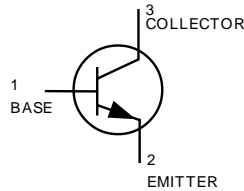


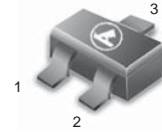
General Purpose Transistors

NPN Silicon



BC817-16WT1

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) $T_A=25^\circ\text{C}$	P_D	225	mW
Derate above 25°C		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate, (2) $T_A=25^\circ\text{C}$	P_D	300	mW
Derate above 25°C		2.4	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

DEVICE MARKING

BC817-16WT1=6A

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

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage (1) ($I_c=10\text{mA}$)	$V_{(BR)CEO}$	45	-	-	V
Collector-Emitter Breakdown Voltage ($I_c=10\mu\text{A}$)	$V_{(BR)CES}$	50			
Emitter-Base Breakdown Voltage ($I_E=10\mu\text{A}$)	$V_{(BR)EBO}$	5	-	-	V
Collector Cutoff Current ($V_{CB}=30\text{V}$)	I_{CBO}	-	-	100	nA
Emitter Cutoff Current ($V_{BE}=7\text{V}$)	I_{EBO}			100	nA

BC817-16WT1

ON CHARACTERISTICS

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

SMALL-SIGNAL CHARACTERISTICS

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

(1) Note: Pulse width $\leq 300\mu\text{Sec}$., Duty cycle $\leq 2.0\%$