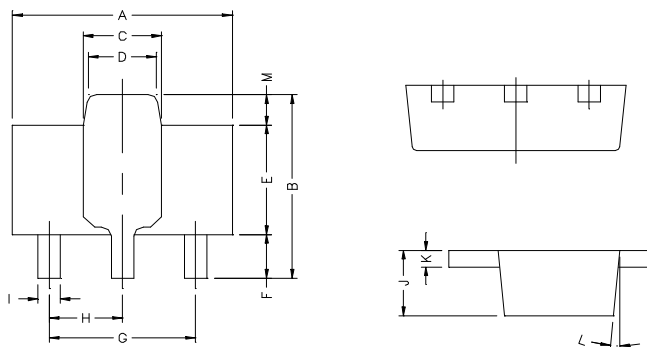


RoHS Compliant Product

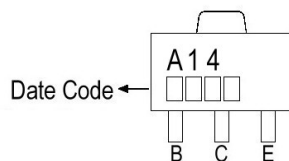
SOT-89

Description

The BCPA14 is a Darlington amplifier transistor designed for applications requiring extremely high current gain.



Marking :



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.4	4.6	G	3.00	REF.
B	4.05	4.25	H	1.50	REF.
C	1.50	1.70	I	0.40	0.52
D	1.30	1.50	J	1.40	1.60
E	2.40	2.60	K	0.35	0.41
F	0.89	1.20	L	5° TYP.	
			M	0.70 REF.	

Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	10	V
Collect Current	I_C	500	mA
Total Power Dissipation	P_D	1.0	W
Operating Junction and Storage Temperature Range	T_j, T_{stg}	-55~+150	°C

ELECTRICAL CHARACTERISTICS (Tamb=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	BV_{CBO}	30	-	-	V	$I_C=100\mu A, I_E=0$
Collector-Emitter Breakdown Voltage	BV_{CEO}	30	-	-	V	$I_C=100\mu A, I_B=0$
Emitter-Base Breakdown Voltage	BV_{EBO}	10	-	-	V	$I_E=10\mu A, I_C=0$
Collector Cut-off Current	I_{CBO}	-	-	100	nA	$V_{CB}=30V, I_E=0$
Collector Cut-off Current	I_{CEO}	-	-	100	nA	$V_{EB}=10V, I_C=0$
Collector Output Capacitance	C_{ob}	-	-	6	pF	$V_{CB}=10V, f=1MHz, I_E=0$
Collector-Emitter Saturation Voltage	$*V_{CE(sat)}$	-	-	1.5	V	$I_C=100mA, I_B=0.1mA$
Base-Emitter Voltage, On	$*V_{BE(on)}$	-	-	2.0	V	$V_{CE}=5V, I_C=100mA$
DC Current Gain	$*h_{FE1}$	10K	-	-		$V_{CE}=5V, I_C=10mA$
DC Current Gain	$*h_{FE2}$	20K	-	-		$V_{CE}=5V, I_C=100mA$
Transition Frequency	f_T	125	-	-	MHz	$V_{CE}=5V, I_C=10mA, f=100MHz$

*Pulse Test: Pulse Width $\leq 380\mu s$, Duty Cycle $\leq 2\%$

Characteristics Curve

