

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

The 2SBA42 is designed for applications as a video output to drive color CRT, or as a dialer circuit in electronics telephone.

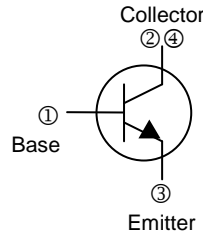
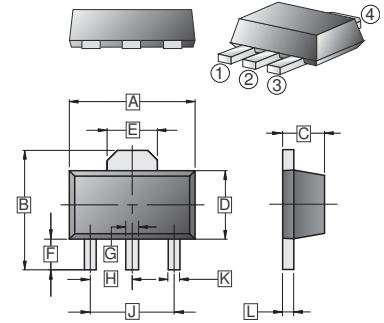
MARKING

A42

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-89	1K	13' inch

SOT-89



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.40	4.60	G	0.40	0.58
B	3.94	4.25	H	1.50	TYP
C	1.40	1.60	J	3.00	TYP
D	2.30	2.60	K	0.32	0.52
E	1.50	1.70	L	0.35	0.44
F	0.89	1.20			

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V_{CBO}	310	V
Collector-Emitter Voltage	V_{CEO}	305	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current -Continuous	I_C	0.2	A
Collector Current -Pulsed	I_{CM}	0.5	A
Collector Power Dissipation	P_D	0.5	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	250	$^\circ\text{C} / \text{W}$
Junction & Storage Temperature	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	310	-	-	V	$I_C=100\mu\text{A}, I_E=0$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	305	-	-	V	$I_C=1\text{mA}, I_B=0$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	5	-	-	V	$I_E=100\mu\text{A}, I_C=0$
Collector cut-off current	I_{CBO}	-	-	0.25	μA	$V_{CB}=200\text{V}, I_E=0$
Collector cut-off current	I_{CEO}	-	-	0.25	μA	$V_{CE}=200\text{V}, I_B=0$
		-	-	5		$V_{CE}=300\text{V}, I_B=0$
Emitter cut-off current	I_{EBO}	-	-	0.1	μA	$V_{EB}=5\text{V}, I_C=0$
DC current gain	$h_{FE(1)}$	60	-	-		$V_{CE}=10\text{V}, I_C=1\text{mA}$
	$h_{FE(2)}$	100	-	300		$V_{CE}=10\text{V}, I_C=10\text{mA}$
	$h_{FE(3)}$	75	-	-		$V_{CE}=10\text{V}, I_C=30\text{mA}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.2	V	$I_C=20\text{mA}, I_B=2\text{mA}$
Base-emitter saturation voltage	$V_{BE(sat)}$	-	-	0.9	V	$I_C=20\text{mA}, I_B=2\text{mA}$
Transition frequency	f_T	50	-	-	MHz	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=30\text{MHz}$