NPN BSS60A-61A-62A

SILICON PLANAR EPITAXIAL TRANSISTORS

They are PNP transistors mounted in TO-39 metal package.
They are designed for use in industrial switching applications e.g. print hammer, solenoid, relay and lamp driving .
NPN complements are the BSS50A – 51A – 52A .
Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CBO}	Collector-Base Voltage	BSS60A	60	V
		BSS61A	80	
		BSS62A	90	
V_{CES}	Collector-Emitter Voltage V_{BE} = 0	BSS60A	45	V
		BSS61A	60	
		BSS62A	80	
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current	I_C	1	A
		I_{CM}	2	
I_B	Base Current		0.1	A
P_{tot}		@ T_{case}= 25°	5	W
		@ T_{amb}= 25°	0.8	
T_J	Junction Temperature		200	℃
T_{Stg}	Storage Temperature range		-65 to +150	℃

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJ-c}	Thermal Resistance, Junction-case	35	K/ W
$R_{thJ-amb}$	Thermal Resistance, Junction-ambient	220	K/ W

ELECTRICAL CHARACTERISTICS

NPN BSS60A-61A-62A

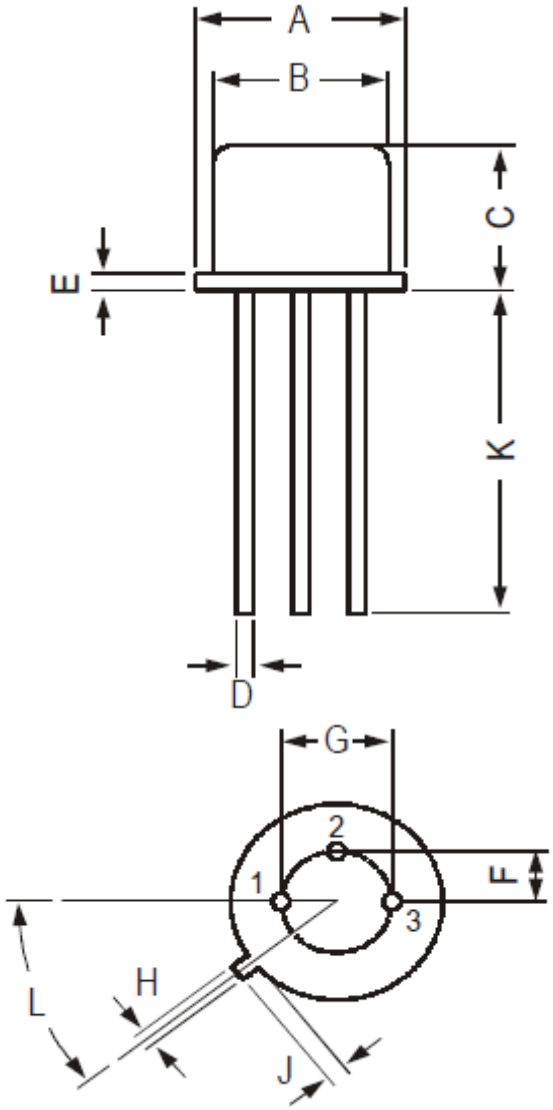
TC=25℃ unless otherwise noted

Symbol	Ratings	Test Condition(s)		Min	Typ	Max	Unit
$-I_{CBO}$	Collector Cutoff Current	I_E= 0, $-V_{CB}$= 45V	BSS60A	-	-	50	nA
		I_E= 0, $-V_{CB}$= 60V	BSS61A				
		I_E= 0, $-V_{CB}$= 80V	BSS62A				
$-I_{EB0}$	Emitter Cutoff Current	I_C= 0, $-V_{EB}$=4 V	BSS60A	-	-	700	µA
			BSS61A				
			BSS62A				
$-V_{CE(SAT)}$	Collector-Emitter saturation Voltage	$-I_C$=500 mA $-I_B$=0.5 mA		-	-	1.3	V
		$-I_C$=500 mA $-I_B$=0.5 mA T_j=200℃		-	-	1.3	
		$-I_C$=1 A, $-I_B$=1 mA	BSS61A	-	-	1.6	
		$-I_C$=1 A, $-I_B$=1 mA T_j=200℃	BSS61A	-	-	1.6	
		$-I_C$=1 A $-I_B$=4 mA	BSS60A / BSS62A	-	-	1.6	
		$-I_C$=1 A $-I_B$=4 mA T_j=200℃	BSS60A / BSS62A	-	-	1.6	
$-V_{BE(SAT)}$	Base-Emitter saturation Voltage	$-I_C$=500 mA $-I_B$=0.5 mA		-	-	1.9	
		$-I_C$=1 A $-I_B$=1 mA	BSS61A	-	-	2.2	
		$-I_C$=1 A $-I_B$=4 mA	BSS60A / BSS62A	-	-	2.2	
h_{FE}	DC Current Gain	$-I_C$=150 mA $-V_{CE}$=10 V	BSS60A	800	-	-	-
			BSS61A				
			BSS62A				
		$-I_C$=500 mA $-V_{CE}$=10 V	BSS60A	2000	-	-	
			BSS61A				
			BSS62A				
h_{fe}	Small Signal Current Gain	$-I_C$=500 mA $-V_{CE}$=5 V f = 35 MHz	BSS60A	-	10	-	-
			BSS61A				
			BSS62A				
t_{on}	Switching times	$-I_{Con}$=500 mA $-I_{B1}$= I_{B2}=0.5 mA		-	0.4	-	µs
t_{off}				-	1.5	-	
t_{on}	Switching times	$-I_{Con}$=1 mA $-I_{B1}$= I_{B2}=1 mA		-	0.4	-	µs
t_{off}				-	1.5	-	

MECHANICAL DATA CASE TO-39

NPN BSS60A-61A-62A

DIMENSIONS (mm)		
	min	max
A	8.50	9.39
B	7.74	8.50
C	6.09	6.60
D	0.40	0.53
E	-	0.88
F	2.41	2.66
G	4.82	5.33
H	0.71	0.86
J	0.73	1.02
K	12.70	-
L	42°	48°



Pin 1 :	Emitter
Pin 2 :	Base
Pin 3 :	Collector
Case :	Collector

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