Elektronische Bauelemente

2SB1116

-1A , -60V

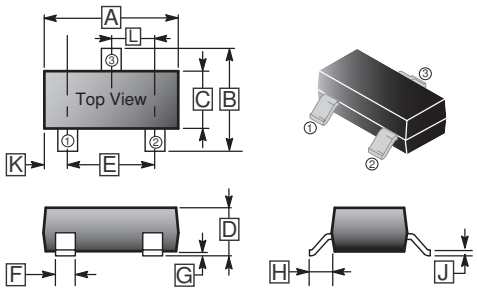
PNP Plastic Encapsulated Transistor

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

FEATURES

- High current surface mount PNP silicon switching transistor for Load management in portable applications

SOT-23



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.04	G	-	0.18
B	2.10	2.80	H	0.40	0.60
C	1.20	1.60	J	0.08	0.20
D	0.89	1.40	K	0.6 REF.	
E	1.78	2.04	L	0.85	1.15
F	0.30	0.50			

CLASSIFICATION OF h_{FE}

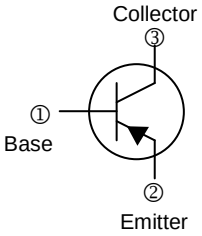
Product-Rank	2SB1116-L	2SB1116-K	2AB1116-U
Range	135~270	200~400	300~600

MARKING

1116

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-23	3K	7 inch



MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector - Base Voltage	V_{CBO}	-60	V
Collector - Emitter Voltage	V_{CEO}	-50	V
Emitter - Base Voltage	V_{EBO}	-6	V
Collector Current - Continuous	I_C	-1	A
Collector Power Dissipation	P_C	350	mW
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	℃

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-60	-	-	V	I_C= -100μA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-50	-	-	V	I_C= -1mA, I_B=0
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-6	-	-	V	I_E= -100μA, I_C=0
Collector Cut-Off Current	I_{CBO}	-	-	-0.1	μA	V_{CB}= -60V, I_E=0
Emitter Cut-Off Current	I_{EBO}	-	-	-0.1	μA	V_{EB}= -6V, I_C=0
DC Current Gain	h_{FE}	135	-	600		V_{CE}= -2V, I_C= -100mA
		81	-	-		V_{CE}= -2V, I_C= -1A
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	-0.3	V	I_C= -1A, I_B = -50mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	-1.2	V	I_C= -1A, I_B = -50mA
Base -emitter voltage	V_{BE}	-0.6	-	-0.7	V	V_{CE}= -2V, I_C= -50mA
Transition frequency	f_T	70	-	-	MHz	V_{CE}= -2V,I_C= -100mA
Collector Output Capacitance	C_{ob}	-	25	-	pF	V_{CB}= -10V, I_E=0, f=1MHz
Turn-on time	t_{ON}	-	0.07	-	μS	V_{CC}= -10V,I_C= -100mA, I_{B1}=-I_{B2}= -0.01A, $V_{BE(off)}$=2~3V
Storage time	t_S	-	0.7	-		
Fall time	t_f	-	0.07	-		