

Dual NPN Small Signal Surface Mount Transistor

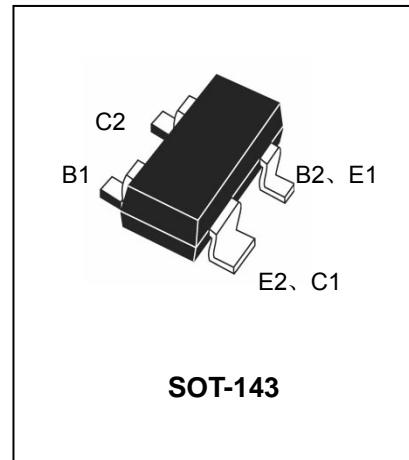
T11

FEATURES

- A surper-minimold package houses 2 transistor.
- Excellent temperture response between these 2 transistor.
- High pairing property in h_{FE} .



Lead-free



APPLICATIONS

- Dual NPN small signal surface mount transistor

ORDERING INFORMATION

Type No.	Marking	Package Code
T11	T11	SOT-143

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Unit	
V_{CBO}	Collector-Base Voltage	TR1	10	V
		TR2	50	
V_{CEO}	Collector-Emitter Voltage	TR2	45	V
V_{EBO}	Emitter-Base Voltage	TR1	5	V
I_C	Collector Current -Continuous		100	mA
P_D	Power Dissipation		200	mW
T_j, T_{stg}	Junction and Storage Temperature		-55 to+150	°C

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

CHARACTERISTICS of TR1(NPN Transistor)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	10	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5	-	V
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$	-	0.1	μA
DC current gain	h_{FE}	$V_{CE}=5V, I_C=1mA$	200	400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=5mA$	-	0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=100mA, I_B=5mA$	-	1	V
Transition frequency	f_T	$V_{CE}=5V, I_C=10mA, f=30MHz$	150	-	MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz, I_E=0$	-	3.5	pF

CHARACTERISTICS of TR2(NPN Transistor)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	50	-	V
Collector-base breakdown voltage	$V_{(BR)CEO}$	$I_C=100\mu A, I_B=0$	45	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=50V, I_E=0$	-	0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=35V, I_B=0$	-	0.1	μA
DC current gain	h_{FE}	$V_{CE}=5V, I_C=1mA$	200	400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=5mA$	-	0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=100mA, I_B=5mA$	-	1	V
Transition frequency	f_T	$V_{CE}=5V, I_C=10mA, f=30MHz$	150	-	MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz, I_E=0$	-	3.5	pF

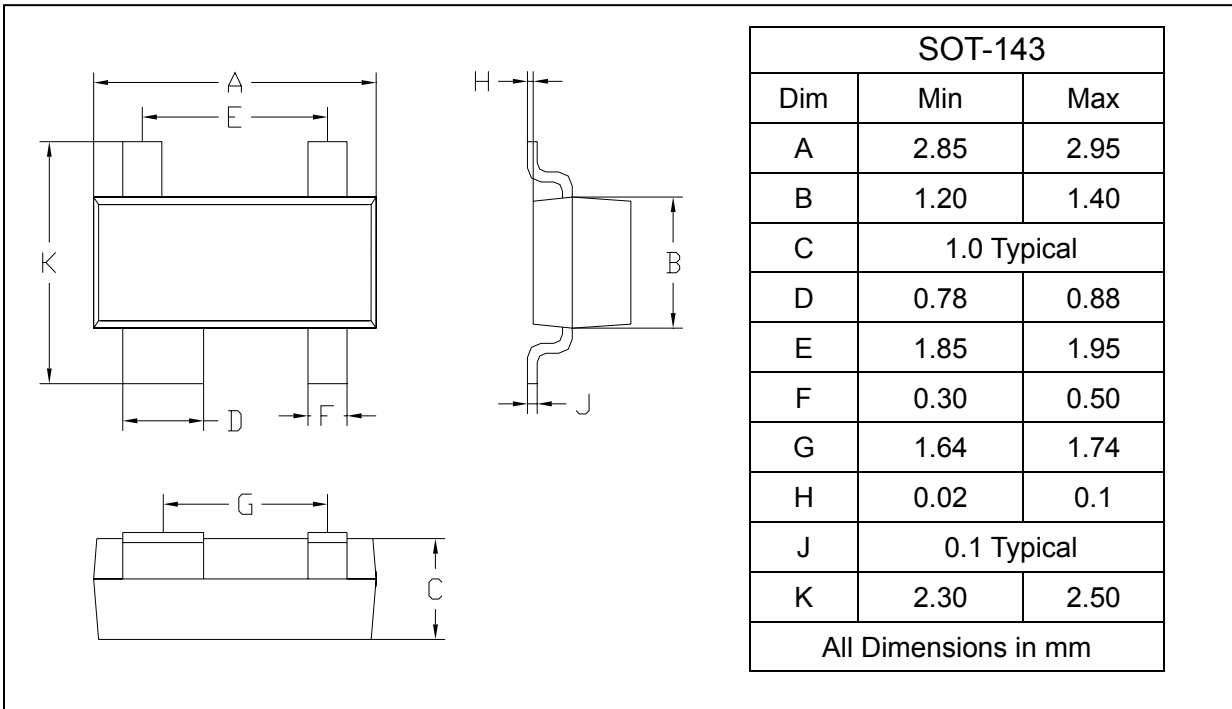
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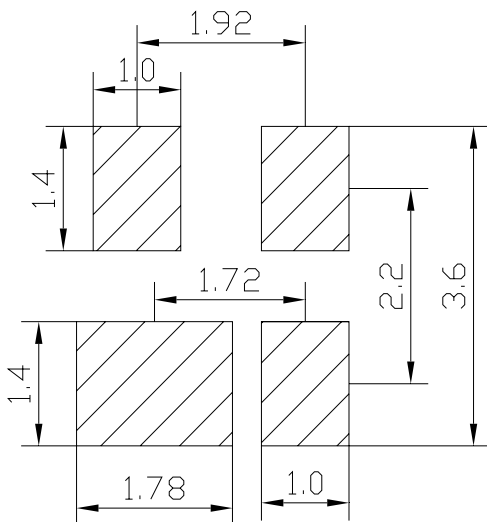
PACKAGE OUTLINE

Plastic surface mounted package

SOT-143



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
T11	SOT-143	2000/package