



NPN 2N2484

SILICON PLANAR EPITAXIAL TRANSISTORS

The 2N2484 are a silicon planar epitaxial NPN transistors mounted in TO-18 metal package. They are intended for use in high-performance, low-noise amplifier circuits from audio to high-frequency.

Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings	Value	Unit
V_{CEO}	Collector-Emitter Voltage	60	V
V_{CBO}	Collector-Base Voltage	60	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	50	mA
P_D	Total Power Dissipation	@ $T_{amb} = 25^\circ$	0.36
		@ $T_{case} = 25^\circ$	1.2
		@ $T_{case} < 100^\circ$	0.68
T_J	Junction Temperature	200	$^\circ C$
T_{Stg}	Storage Temperature range	-65 to +200	$^\circ C$

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJ-a}	Thermal Resistance, Junction-ambient	486	$^\circ C/W$
R_{thJ-c}	Thermal Resistance, Junction-case	146	$^\circ C/W$

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

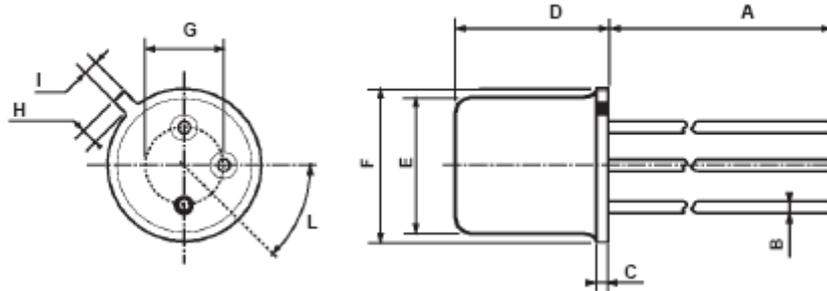
Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit	
I_{CBO}	Collector Cutoff Current	$V_{CB}=45\text{ V}, I_E=0$	-	-	10	nA	
I_{CBO}	Collector Cutoff Current	$V_{CB}=45\text{ V}, I_E=0$ $T_j=150^\circ\text{C}$	-	-	10	μA	
I_{EBO}	Emitter Cutoff Current	$V_{BE}=5.0\text{ V}, I_C=0$	-	-	10	nA	
$V_{CEO} (*)$	Collector Emitter Breakdown Voltage	$I_C=10\text{ mA}, I_B=0$	60	-	-	V	
V_{CBO}	Collector Base Breakdown Voltage	$I_C=10\text{ }\mu\text{A}, I_E=0$	60	-	-	V	
V_{EBO}	Emitter Base Breakdown Voltage	$I_E=10\text{ }\mu\text{A}, I_C=0$	6	-	-	V	
$h_{FE} (*)$	DC Current Gain	$I_C=1\text{ }\mu\text{A}, V_{CE}=5\text{ V}$	30	200	-	-	
		$I_C=10\text{ }\mu\text{A}, V_{CE}=5\text{ V}$	100	290	500		
		$I_C=100\text{ }\mu\text{A}, V_{CE}=5\text{ V}$	175	375	-		
		$I_C=500\text{ }\mu\text{A}, V_{CE}=5\text{ V}$	200	430	-		
		$I_C=1\text{ mA}, V_{CE}=5\text{ V}$	250	450	-		
		$I_C=10\text{ mA}, V_{CE}=5\text{ V}$	-	430	800		
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage	$I_C=1\text{ mA}, I_B=0.1\text{ mA}$	-	0.2	0.35	V	
		$I_C=100\text{ }\mu\text{A}, V_{CE}=5\text{ V}$	0.5	0.57	0.7		
f_T	Transition frequency	$I_C=50\text{ }\mu\text{A}, V_{CE}=5\text{ V}$ $f=5\text{ MHz}$	15	20	-	MHz	
		$I_C=500\text{ }\mu\text{A}, V_{CE}=5\text{ V}$ $f=30\text{ MHz}$	60	78	-		
h_{fe}	Small signal current gain	$I_C=1\text{ mA}, V_{CE}=5.0\text{ V}$ $f=1\text{ KHz}$	150	400	900	-	
C_{CBO}	Collector-Base Capacitance	$I_E=0, V_{CB}=5\text{ V}$ $f=1\text{ MHz}$	-	3.5	6	pF	
C_{EBO}	Emitter-Base Capacitance	$I_C=0, V_{EB}=0.5\text{ V}$ $f=1\text{ MHz}$	-	3.5	6	pF	
NF	Noise figure	$I_C=0$ $V_{CE}=5.0\text{ V}$ $R_g=10\text{ k}\Omega$	$f=100\text{ Hz}$	-	4	10	dB
			$f=1\text{ kHz}$	-	1.8	3	
			$f=10\text{ kHz}$	-	0.6	2	
			$f=10\text{ to }10000\text{ Hz}$	-	1.8	3	

(*) Pulse conditions : $t_p < 300\text{ }\mu\text{s}, \delta = 1\%$

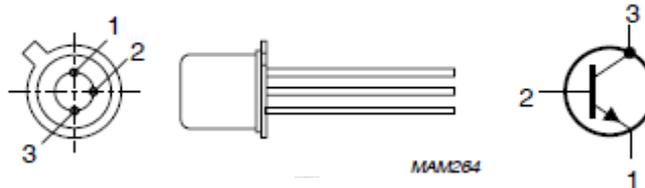
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MECHANICAL DATA CASE TO-18

DIMENSIONS (mm)		
	min	max
A	12.7	-
B	-	0.49
C	0.9	-
D	-	5.3
E	-	4.9
F	-	5.8
G	2.54	-
H	-	1.2
I	-	1.16
L	45°	-



Pin 1 :	emitter
Pin 2 :	base
Pin 3 :	Collector
Case :	Collector



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