

**/ Descriptions**

Silicon PNP transistor in a TO-252 Plastic Package.

**/ Features**

Low  $V_{CE(sat)}$ , complements the 2SD1760.

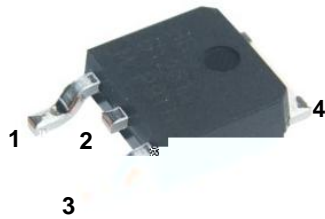
**/ Applications**

Power amplifier applications.

**/ Equivalent Circuit**



**/ Pinning**



PIN1 Base      PIN 2,4 Collector      PIN 3 Emitter

**/  $h_{FE}$  Classifications & Marking**

$h_{FE}$ Classifications Symbol	P	Q	R
$h_{FE}$ Range	82 180	120 270	180 390

**/ Absolute Maximum Ratings(Ta=25 )**

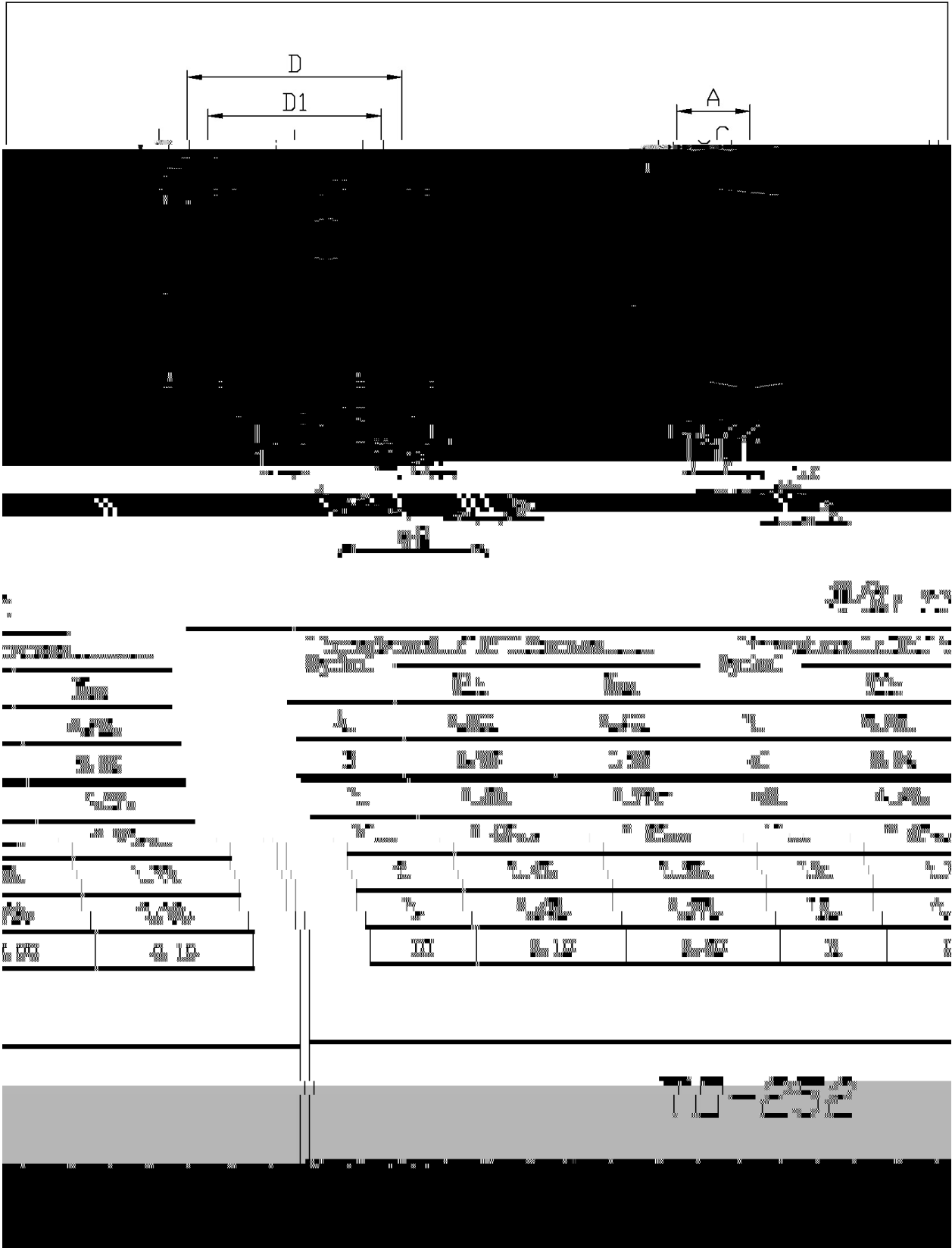
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	-60	V
Collector to Emitter Voltage	$V_{CEO}$	-50	V
Emitter to Base Voltage	$V_{EBO}$	-5.0	V
Collector Current - Continuous	$I_C$	-3.0	A
Collector Power Dissipation	$P_C$	1.0	W
Collector Power Dissipation	$P_C(T_c=25 )$	15	W
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 150	

**/ Electrical Characteristics(Ta=25 )**

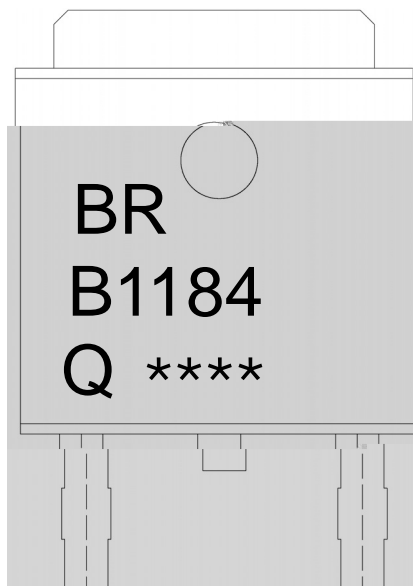
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	$V_{CBO}$	$I_C=-50 A \quad I_E=0$	-60			V
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=-1.0mA \quad I_B=0$	-50			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=-50 A \quad I_C=0$	-5.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-40V \quad I_E=0$			-1.0	A
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=-4.0V \quad I_C=0$			-1.0	A
DC Current Gain	$h_{FE}$	$V_{CE}=-3.0V \quad I_C=-0.5A$	82		390	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-2.0A \quad I_B=-0.2A$			-1.0	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-1.5A \quad I_B=-0.15A$			-1.2	V
Transition Frequency	$f_T$	$V_{CE}=-5.0V \quad I_C=-0.5A$ $f=30MHz$		70		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10V \quad I_E=0$ $f=1.0MHz$		50		pF

**2SB1184**  
Rev.E May.-2016

/ Package Dimensions



/ Marking Instructions



BR

$h_{FE}$

Note:

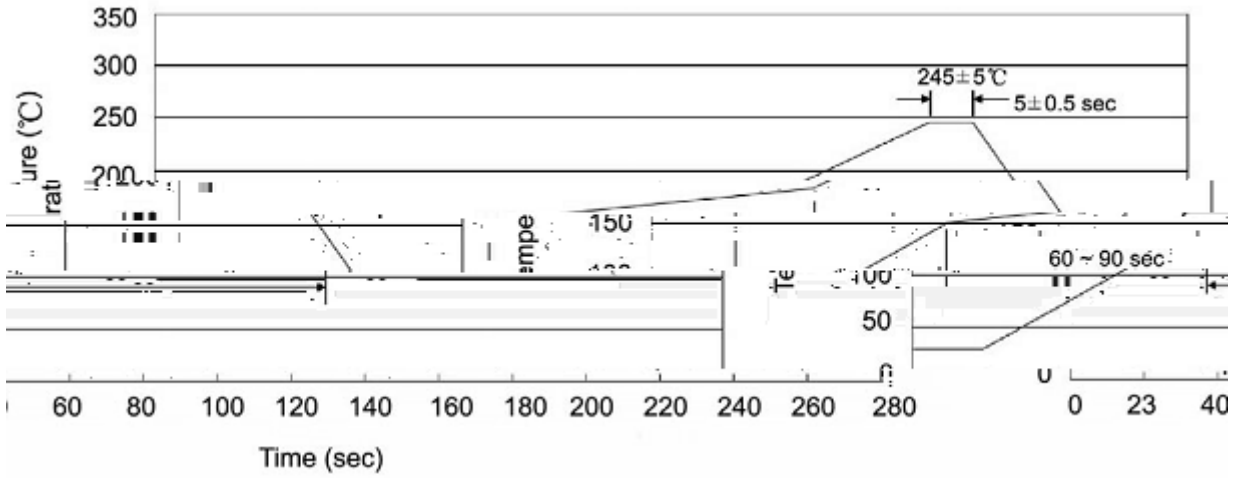
BR: Company Code

B1184: Product Type.

Q:  $h_{FE}$  Classifications Symbol

\*\*\*\*: Lot No. Code, code change with Lot No.

( ) /



Note:

- 1. 25 150 60 90sec; 1.Preheating:25~150 °C, Time:60~90sec.
- 2. 245 5 5 0.5sec; 2.Peak Temp.:245 ± 5 °C, Duration:5 ± 0.5sec.
- 3. 2 10 /sec. 3. Cooling Speed: 2~10 °C/sec.

/ Resistance to Soldering Heat Test Conditions

260 ± 5 °C, 10 ± 1 sec, Temp.:260±5 °C, Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm <sup>3</sup> )		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
TO-252	2,500	2	5,000	5	25,000	13 × 16	360×360×50	385×257×392

/ TUBE

Package Type	Units					Dimension (unit mm <sup>3</sup> )		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

/ Notices