

**/ Descriptions**

TO-92          NPN          Silicon NPN transistor in a TO-92 Plastic Package.

**/ Features**

High  $h_{FE}$ , low  $V_{CE(sat)}$ .

**/ Applications**

General purpose amplifier.

**/ Equivalent Circuit**



**/ Pinning**



PIN1 Base          PIN 2 Collector          PIN 3 Emitter

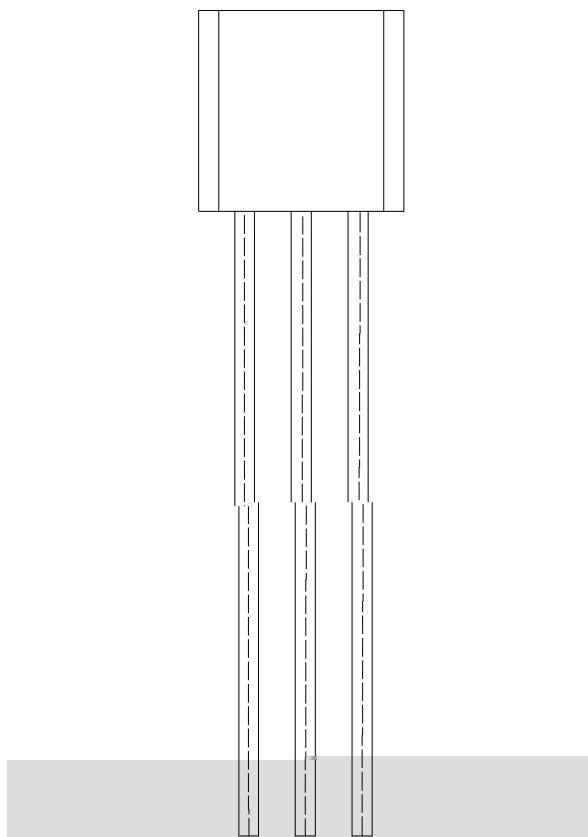
**/  $h_{FE}$  Classifications & Marking**

$h_{FE}$ Classifications Symbol	Q	R	S
$h_{FE}$ Range	160~260	200~340	290~460

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	60	V
Collector to Emitter Voltage	$V_{CEO}$	50	V
Emitter to Base Voltage	$V_{EBO}$	7.0	V
Collector Current - Continuous	$I_C$	100	mA
Collector Current – Continuous(Pulse)	$I_{CP}$	200	mA
Collector Power Dissipation	$P_C$	400	mW
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 150	

Parameter                      Symbol                      Test Conditions                      Min





( ) / **Temperature Profile for Dip Soldering(Pb-Free)**



- |   |        |           |   |
|---|--------|-----------|---|
| 1 | 25 150 | 60 90sec; | Note:<br>1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255±5  | 5±0.5sec; | 2.Peak Temp.:255±5 , Duration:5±0.5sec.       |
| 3 | 2 10   | /sec.     | 3. Cooling Speed: 2~10 /sec.                  |

/ **Resistance to Soldering Heat Test Conditions**

270±5                      10±1 sec.                      Temp:270±5                      Time:10±1 sec

/ **Packaging SPEC.**

/ BULK

Package Type	Units	Dimension	(unit mm3)
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