

/ Descriptions

Silicon NPN transistor in a TO-252 Plastic Package.

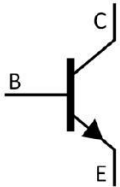
/ Features

High voltage, low saturation voltage, low collector output capacitance, complementary pair with MPSA92D.

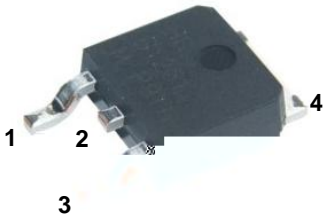
/ Applications

High voltage control circuit.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2,4 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

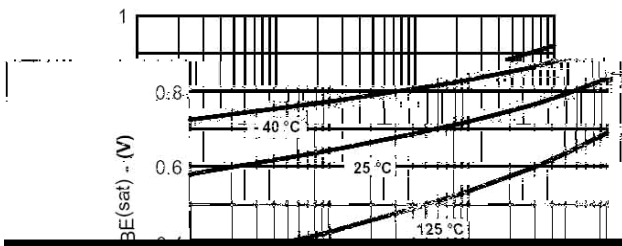
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	300	V
Collector to Emitter Voltage	V_{CEO}	300	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	500	mA
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=100\text{ A}$ $I_E=0$	300			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0\text{mA}$ $I_B=0$	300			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=100\text{ A}$ $I_C=0$	6.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=200\text{V}$ $I_E=0$			0.1	A
Emitter Cut-Off Current	I_{EBO}	$V_{BE}=6.0\text{V}$ $I_C=0$			0.1	A
DC Current Gain	$h_{FE(1)}$	$V_{CE}=10\text{V}$ $I_C=10\text{mA}$	40			
	$h_{FE(2)}$	$V_{CE}=10\text{V}$ $I_C=30\text{mA}$	40			
	$h_{FE(3)}$	$V_{CE}=10\text{V}$ $I_C=1.0\text{mA}$	25			

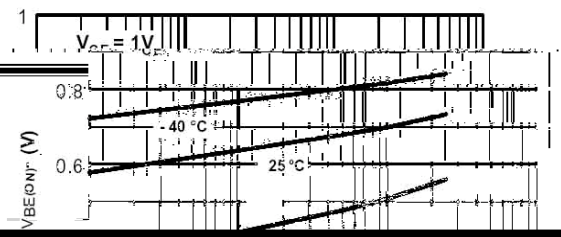
Collecto

/ Electrical Characteristic Curve

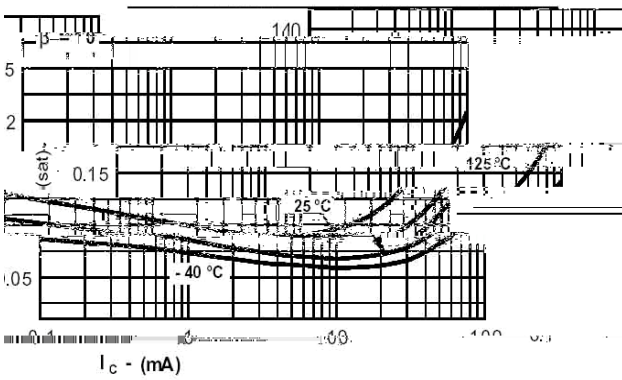
$V_{BE(sat)} - I_C$



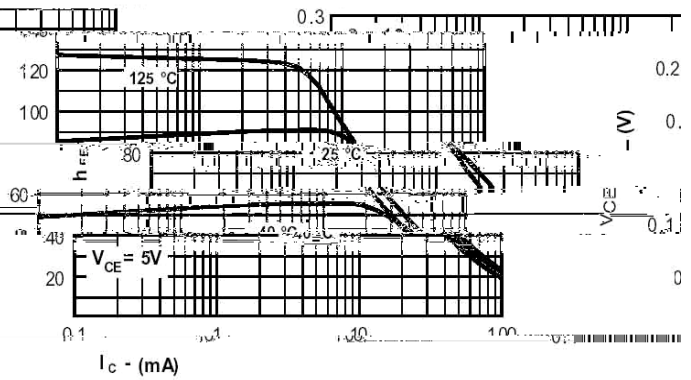
$V_{BE(on)} - I_C$



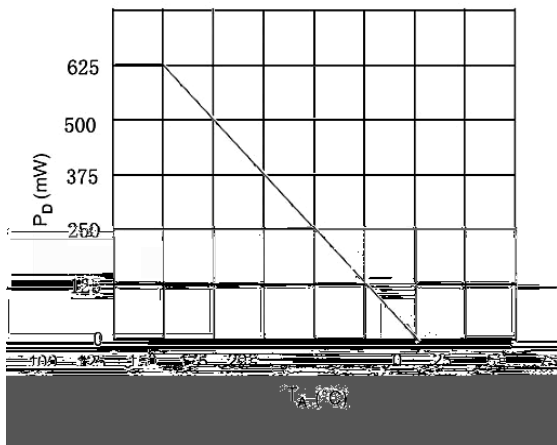
$h_{FE} - I_C$



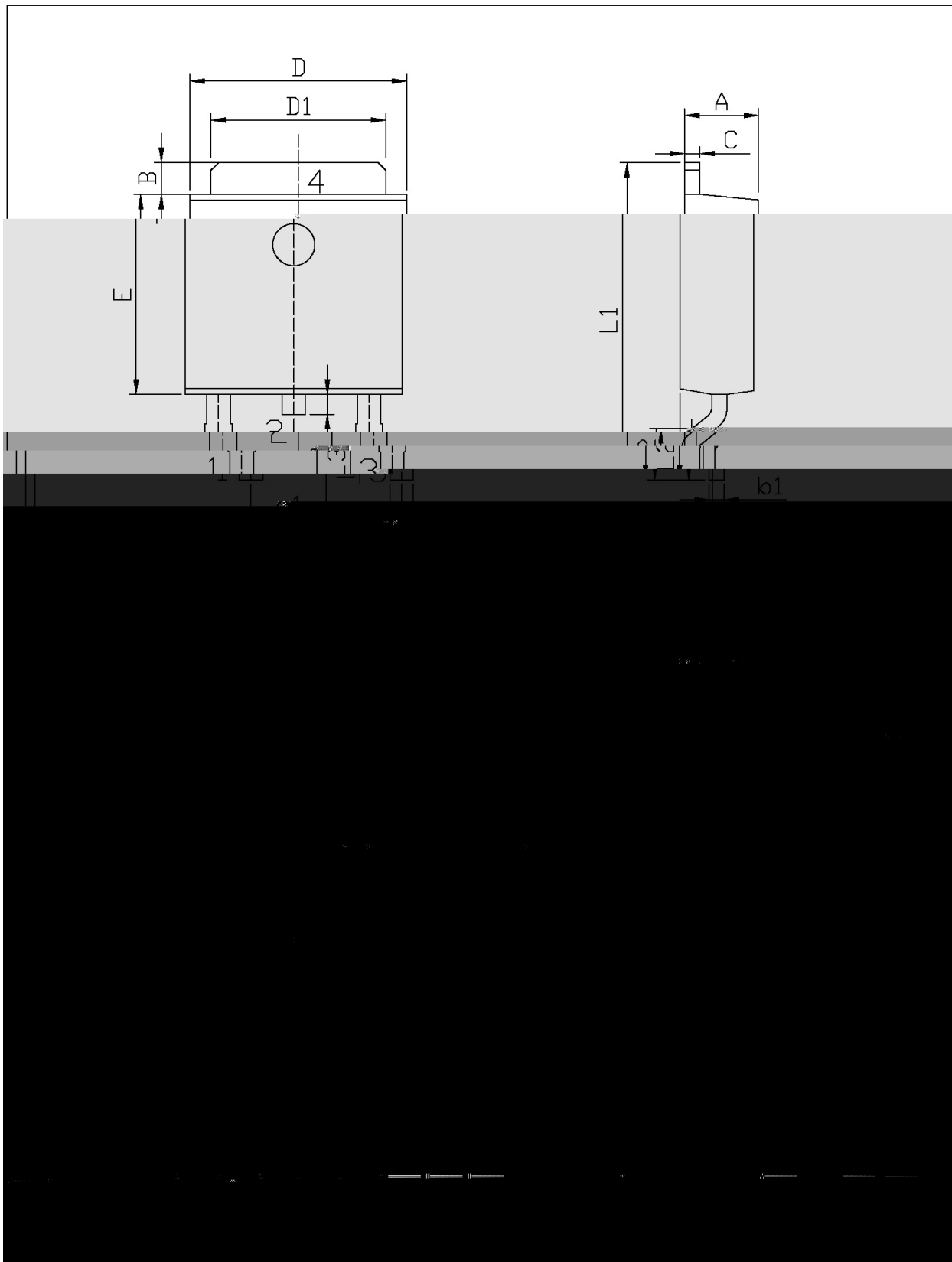
$V_{CE(sat)} - I_C$



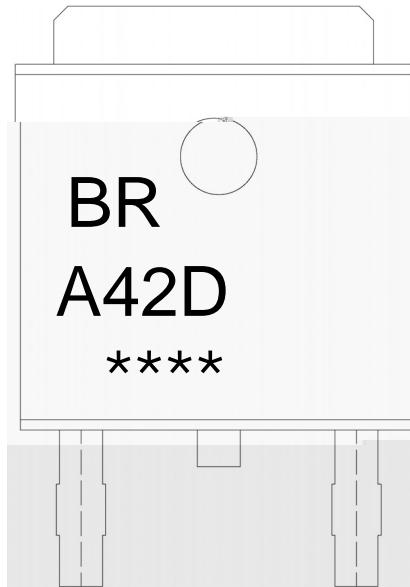
$P_D - T_A$



/ Package Dimensions



/ Marking Instructions



BR

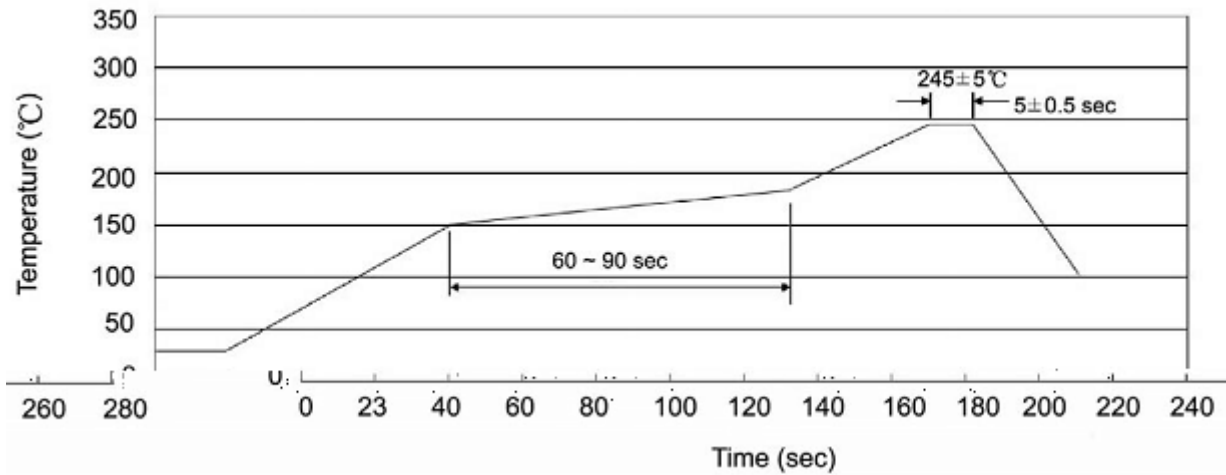
Note:

BR: Company Code

A42D: Product Type.

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

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

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

/ Resistance to Soldering Heat Test Conditions

260 5 10 1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	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 ³)		
	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