



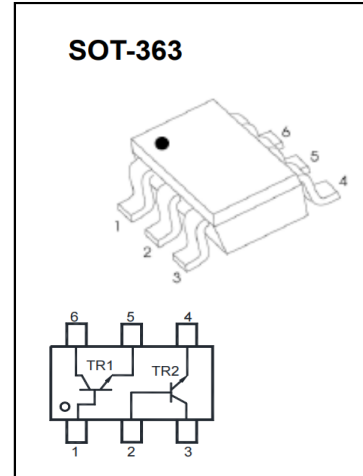
## TRANSISTOR (NPN)

### FEATURES

- Halogen and Antimony Free(HAF),  
RoHS compliant

**MARKING:** 4021

**MAXIMUM RATINGS** (T<sub>a</sub>=25°C unless otherwise noted)



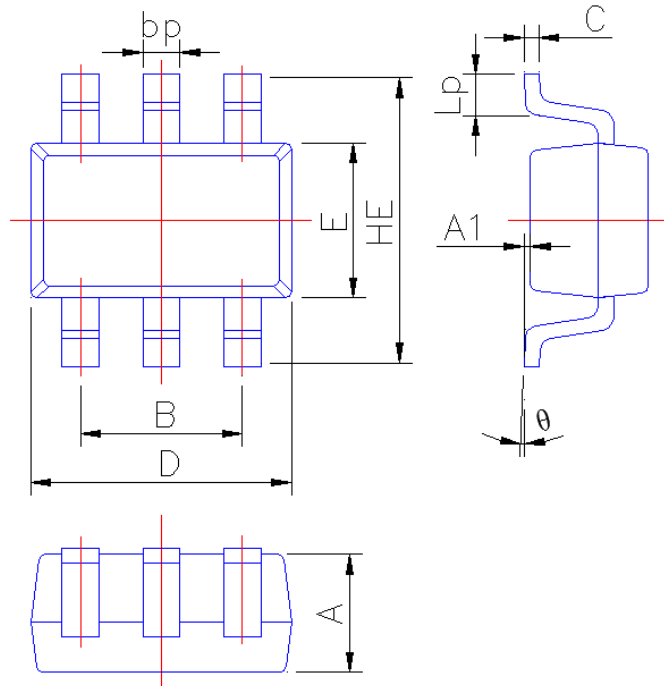
Parameter	Symbol	Value	Unit
Collector Base Voltage	V <sub>CBO</sub>	50	V
Collector Emitter Voltage	V <sub>CEO</sub>	45	V
Emitter Base Voltage	V <sub>EBO</sub>	6	V
Collector Current	I <sub>C</sub>	100	mA
Peak Collector Current, Pulsed	I <sub>CM</sub>	200	mA
Total Power Dissipation	P <sub>tot</sub>	250	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	- 55 to + 150	°C

### ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at V <sub>CE</sub> = 5 V, I <sub>C</sub> = 2 mA	h <sub>FE</sub>	200	450	-
Collector Base Voltage at I <sub>C</sub> = 10 μA	V <sub>CBO</sub>	50	-	V
Collector Emitter Voltage at I <sub>C</sub> = 10 mA	V <sub>CEO</sub>	45	-	V
Emitter Base Voltage at I <sub>E</sub> = 1 μA	V <sub>EBO</sub>	6	-	V
Collector Base Cutoff Current at V <sub>CB</sub> = 30 V	I <sub>CBO</sub>	-	15	nA
Emitter Base Cutoff Current at V <sub>EB</sub> = 5 V	I <sub>EBO</sub>	-	100	nA
Collector Emitter Saturation Voltage at I <sub>C</sub> = 10 mA, I <sub>B</sub> = 0.5 mA at I <sub>C</sub> = 100 mA, I <sub>B</sub> = 5 mA	V <sub>CE(sat)</sub>	-	0.2 0.4	V
Base Emitter Voltage at V <sub>CE</sub> = 5 V, I <sub>C</sub> = 2 mA at V <sub>CE</sub> = 5 V, I <sub>C</sub> = 10 mA	V <sub>BE</sub>	0.58 -	0.7 0.77	V
Transition Frequency at V <sub>CE</sub> = 5 V, I <sub>C</sub> = 10 mA, f = 100 MHz	f <sub>T</sub>	100	-	MHz
Collector Output Capacitance at V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz	C <sub>ob</sub>	-	4.5	pF



## SOT-363 Package Outline Dimensions



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.00
A1	0.010	0.100
B	1.20	1.40
bp	0.25	0.45
C	0.09	0.15
D	2.00	2.20
E	1.15	1.35
HE	2.15	2.55
Lp	0.25	0.46
θ	0°	6°