

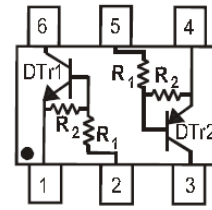
### Features

- Both the DTA115E chip and DTC115E chip in SOT-363 package
- Surface mount package suited for automated assembly

HF

### Mechanical Data

- Case: SOT-363
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



SOT-363

### Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
DCX115EU	SOT-363	3000 pcs / Tape & Reel	C01

### Maximum Ratings (@ T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	Value		Unit
		DTr1	DTr2	
Supply Voltage	V <sub>CC</sub>	50	-50	V
Input Voltage	V <sub>I</sub>	-10 ~ +40	10 ~ -40	V
Output Current	I <sub>O</sub>	20	-20	mA
Collector Current	I <sub>C(Max)</sub>	100	-100	mA

### Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation <sup>1,2</sup>	P <sub>D</sub>	200	mW
Thermal Resistance Junction-to-Air	R <sub>θJA</sub>	625	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55 ~ +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ +150	°C

Notes:

- Mounted on FR-4 PC Board with minimum recommended pad layout
- 150mW per element must not be exceeded

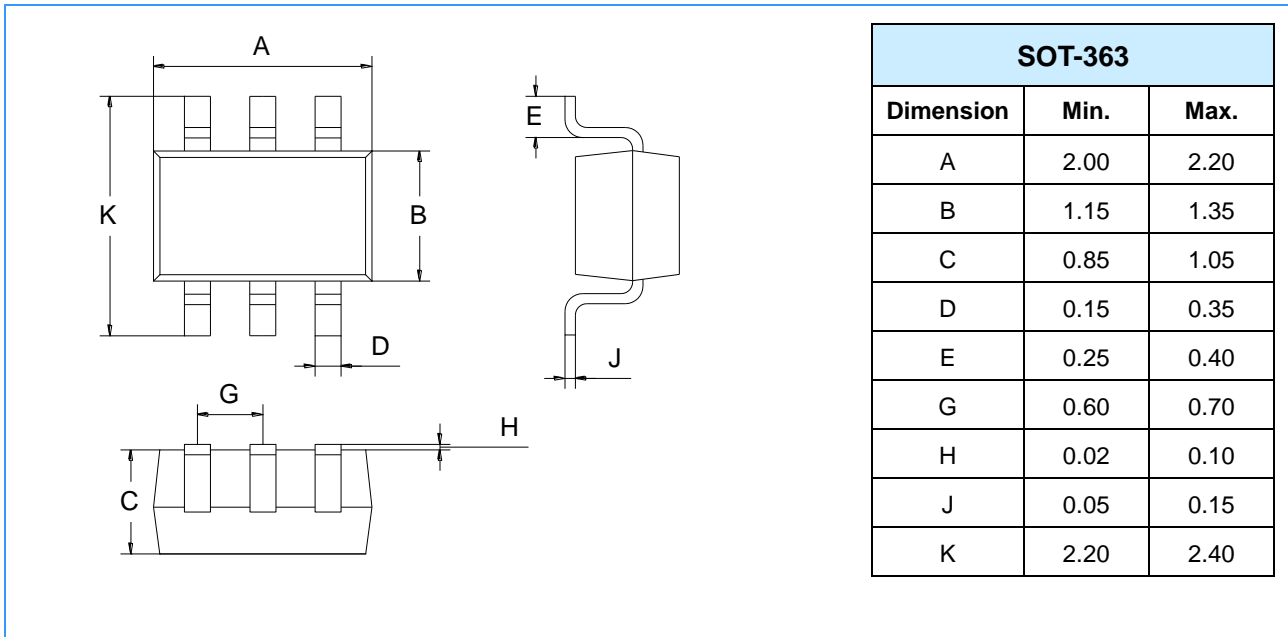
### Electrical Characteristics-DTr1 (@ T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input Voltage	V <sub>I(OFF)</sub>	V <sub>CC</sub> = 5V, I <sub>O</sub> = 100μA	0.5	-	-	V
Input Voltage	V <sub>I(ON)</sub>	V <sub>O</sub> = 0.3V, I <sub>O</sub> = 1mA	-	-	3	V
Output Voltage	V <sub>O(on)</sub>	I <sub>O</sub> = 10mA, I <sub>I</sub> = 0.5mA	-	-	0.3	V
Input Current	I <sub>I</sub>	V <sub>I</sub> = 5V	-	-	0.15	mA
Output Current	I <sub>O(off)</sub>	V <sub>CC</sub> = 50V, V <sub>I</sub> = 0V	-	-	0.5	μA
DC Current Gain	G <sub>I</sub>	V <sub>O</sub> = 5V, I <sub>O</sub> = 5mA	82	-	-	-
Input Resistor	R <sub>1</sub> (R <sub>2</sub> )		70	100	130	kΩ
Resistance ratio	R <sub>2</sub> /R <sub>1</sub>		0.8	1	1.2	-
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = 10V, I <sub>E</sub> = -5mA f = 100MHz	-	250	-	MHz

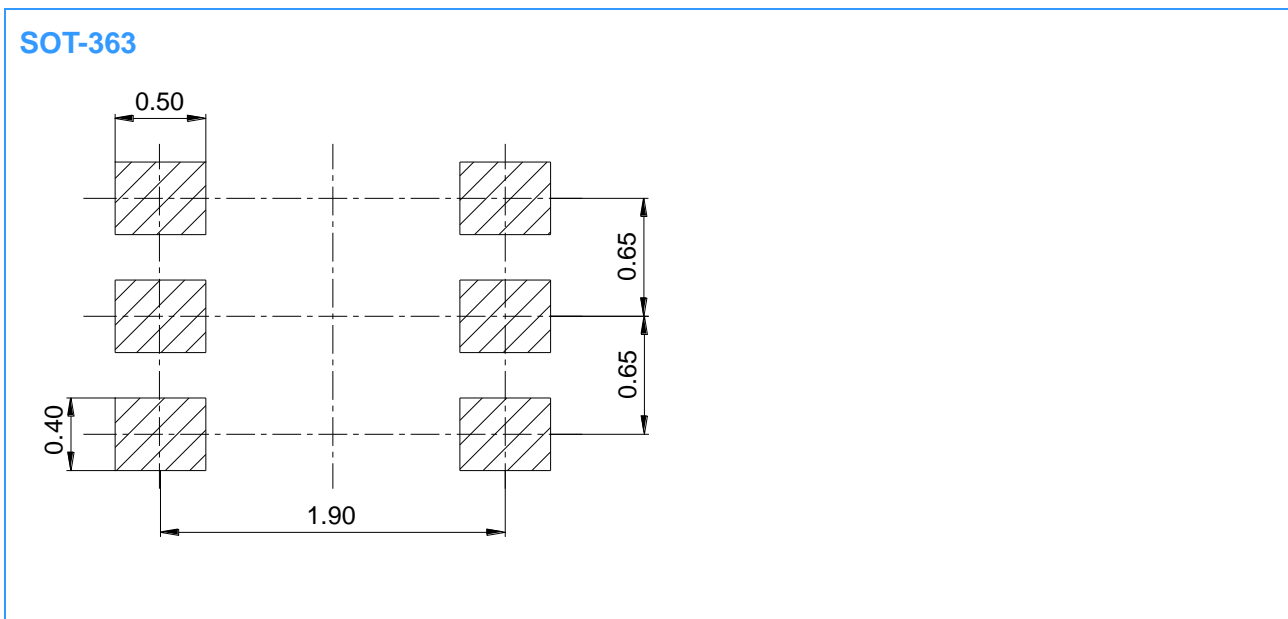
### Electrical Characteristics-DTr2 (@ T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input Voltage	V <sub>I(OFF)</sub>	V <sub>CC</sub> = -5V, I <sub>O</sub> = -100μA	-0.5	-	-	V
Input Voltage	V <sub>I(ON)</sub>	V <sub>O</sub> = -0.3V, I <sub>O</sub> = -1mA	-	-	-3	V
Output Voltage	V <sub>O(on)</sub>	I <sub>O</sub> = -10mA, I <sub>I</sub> = -0.5mA	-	-	-0.3	V
Input Current	I <sub>I</sub>	V <sub>I</sub> = -5V	-	-	-0.15	mA
Output Current	I <sub>O(off)</sub>	V <sub>CC</sub> = -50V, V <sub>I</sub> = 0V	-	-	-0.5	μA
DC Current Gain	G <sub>I</sub>	V <sub>O</sub> = -5V, I <sub>O</sub> = -5mA	82	-	-	-
Input Resistor	R <sub>1</sub> (R <sub>2</sub> )		70	100	130	kΩ
Resistance ratio	R <sub>2</sub> /R <sub>1</sub>		0.8	1	1.2	-
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = -10V, I <sub>E</sub> = 5mA f = 100MHz	-	250	-	MHz

**Package Outline Dimensions** (Unit: mm)



**Mounting Pad Layout** (Unit: mm)



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