

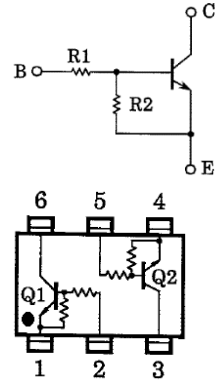
Features

- Epitaxial planar die construction
- Built-in biasing resistors, $R_1 = R_2$
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

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
TUNM1N	SOT-363	3000 pcs / Tape & Reel	XC

Maximum Ratings (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V_{CBO}	50	V
Collector-Emitter Breakdown Voltage	V_{CEO}	50	V
Emitter-Base Breakdown Voltage	V_{EBO}	10	V
Collector Current (Continuous)	I_C	100	mA

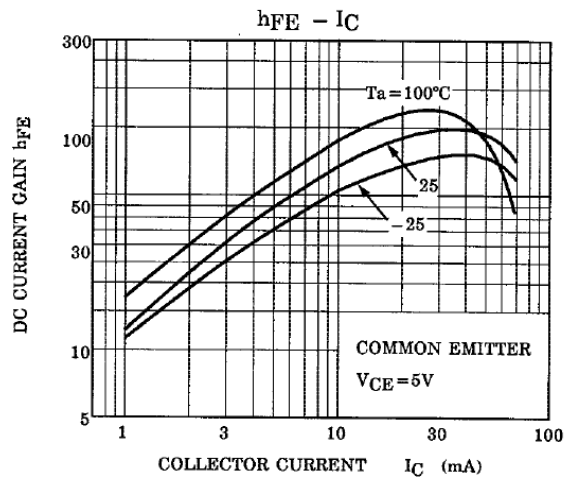
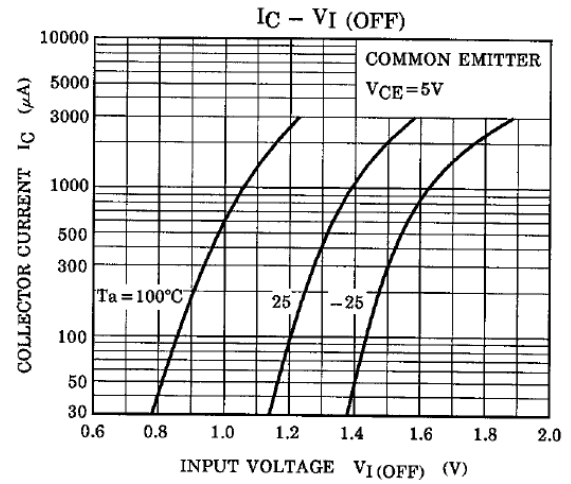
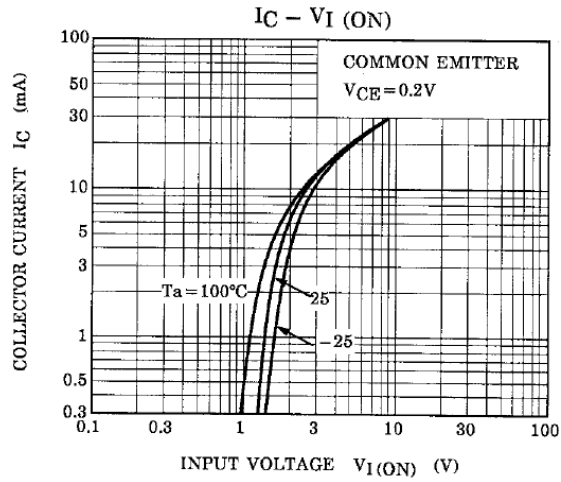
Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	200	mW
Operating Junction Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ\text{C}$

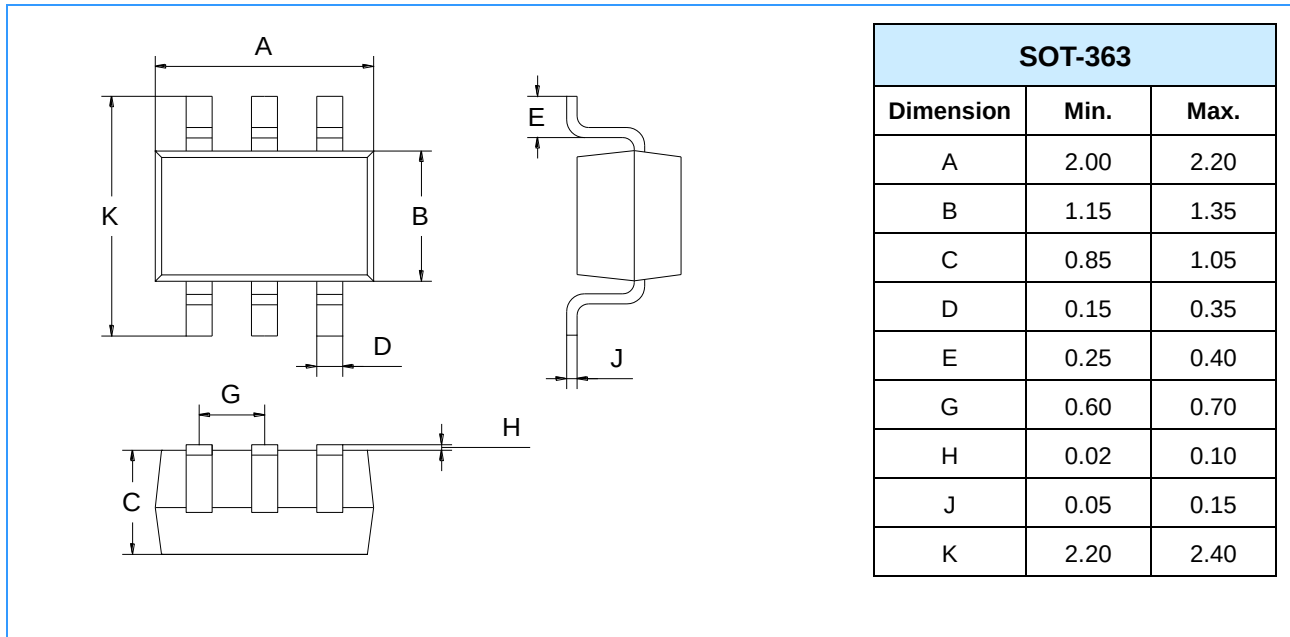
Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector Cut-off Current	I_{CBO}	$V_{CB} = 50\text{V}, I_E = 0$	-	-	0.1	μA
Collector Cut-off Current	I_{CEO}	$V_{CE} = 50\text{V}, I_B = 0$	-	-	0.5	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 10\text{V}, I_C = 0$	-	-	0.33	mA
DC Current Gain	h_{FE}	$V_{CE} = 5\text{V}, I_C = 10\text{mA}$	70	-	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5\text{mA}, I_B = 0.25\text{mA}$	-	-	0.3	V
Input voltage	$V_{I(ON)}$	$V_{CE} = 0.2\text{V}, I_C = 5\text{mA}$	1.3	-	3	V
Input voltage	$V_{I(OFF)}$	$V_{CE} = 5\text{V}, I_C = 0.1\text{mA}$	1	-	1.5	V
Transition Frequency	f_T	$V_{CE} = 10\text{V}, I_C = 5\text{mA}$	-	250	-	MHz
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = I_C = 0$ $f = 1\text{MHz}$	-	-	6	pF
Input Resistor	R_1		15.4	22	28.6	$\text{k}\Omega$
Resistance ratio	R_1/R_2		0.9	1.0	1.1	-

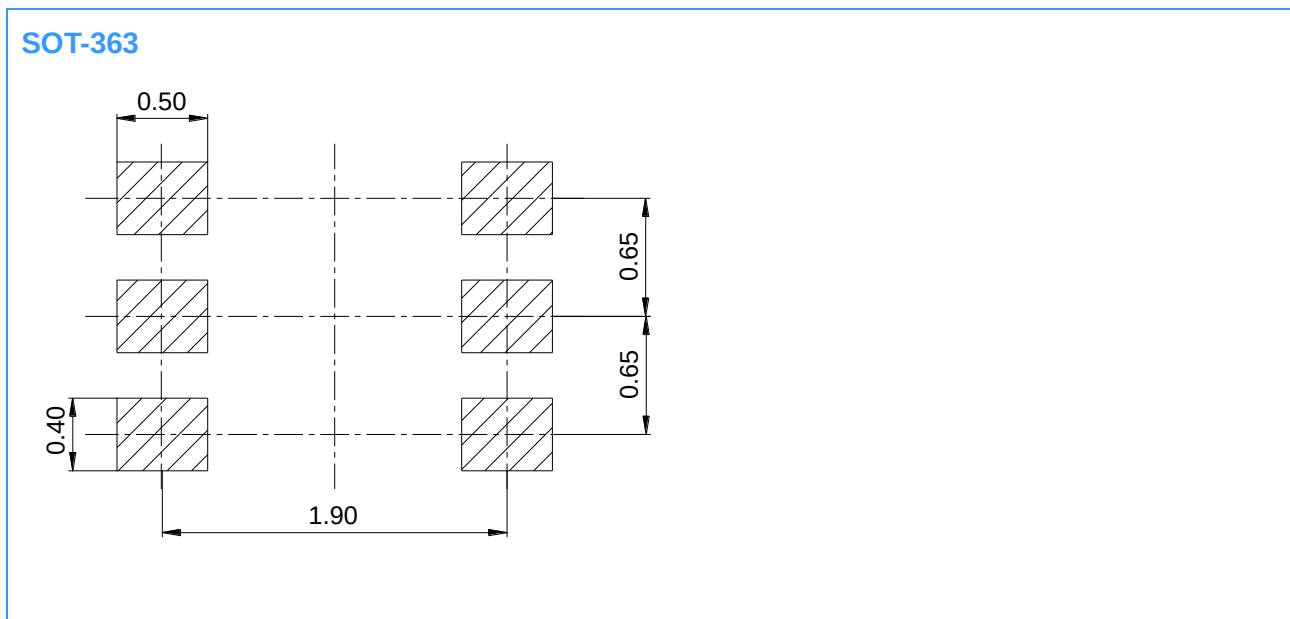
Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)



Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



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