

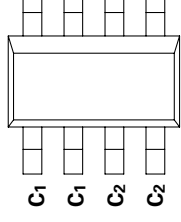


THE DATASHEET OF ZDT749TA



SM-8 DUAL PNP MEDIUM TRANSISTORS

ISSUE 1 - NOVEMBER 1995



PARTMARKING DETAIL - T749

ABSOLUTE MAXIMUM RATINGS

PARAMETER
Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Peak Pulse Current
Continuous Collector Current
Operating and Storage Temperature F

THERMAL CHARACTERISTICS

PARAMETER
Total Power Dissipation at $T_{amb} = 25^{\circ}\text{C}$ Any single die "on" Both die "on" equally
Derate above 25°C * Any single die "on" Both die "on" equally
Thermal Resistance - Junction to Ambient Any single die "on" Both die "on" equally

* The power which can be dissipated on a PCB with copper equal to 2 inches

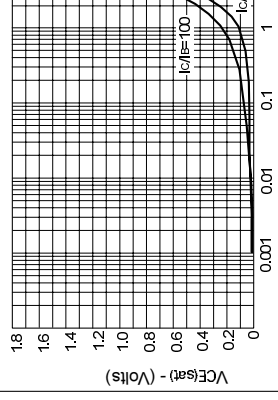
ZDT749

TYPICAL CHARACTERISTICS

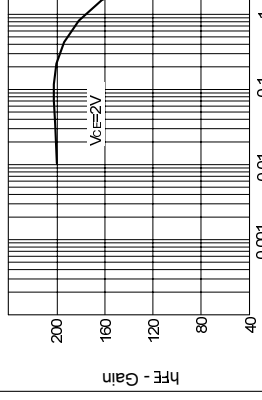
ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}\text{C}$ unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-35			V	$I_C = 100\mu\text{A}, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-25			V	$I_C = 10\text{mA}, I_B = 0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E = 100\mu\text{A}, I_C = 0$
Collector Cutoff Current	I_{CBO}			-0.1 -10	μA μA	$V_{CB} = -30\text{V}$ $V_{CB} = -30\text{V}, T_{amb} = 100^{\circ}\text{C}$
Emitter Cutoff Current	I_{EBO}			-0.1	μA	$V_{EB} = -4\text{V}, I_E = 0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.12 -0.23	-0.3 -0.5	V V	$I_C = 1\text{A}, I_B = 100\text{mA}^*$ $I_C = 2\text{A}, I_B = 200\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-0.9	-1.25	V	$I_C = 1\text{A}, I_B = 100\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		-0.8	-1	V	$I_C = 1\text{A}, V_{CE} = -2\text{V}^*$
Static Forward Current Transfer Ratio	h_{FE}	70 100 75 15	200 200 150 50	300		$I_C = 50\text{mA}, V_{CE} = -2\text{V}^*$ $I_C = 1\text{A}, V_{CE} = -2\text{V}^*$ $I_C = 2\text{A}, V_{CE} = -2\text{V}^*$ $I_C = 6\text{A}, V_{CE} = -2\text{V}^*$
Transition Frequency	f_T	100	160		MHz	$I_C = 100\text{mA}, V_{CE} = -5\text{V}$ $f = 100\text{MHz}$
Output Capacitance	C_{obo}		55	100	pF	$V_{CB} = -10\text{V}, f = 1\text{MHz}$
Switching Times	t_{on}		40		ns	$I_C = 500\text{mA}, V_{CC} = -10\text{V}$ $I_{B1} = I_{B2} = 50\text{mA}$
	t_{off}		450		ns	

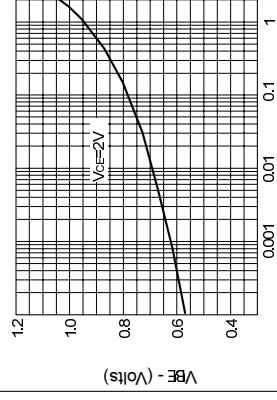
*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$



$V_{CE(sat)}$ v I_C
 I_C - Collector Current (Amps)



h_{FE} v I_C
 I_C - Collector Current (Amps)



$V_{BE(on)}$ v I_C
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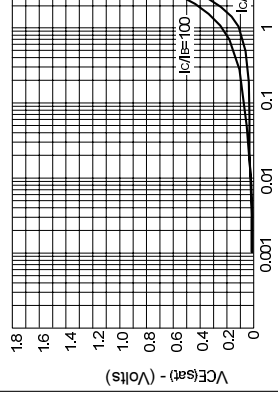
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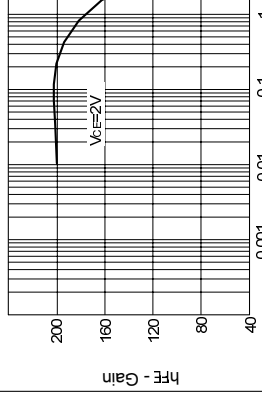
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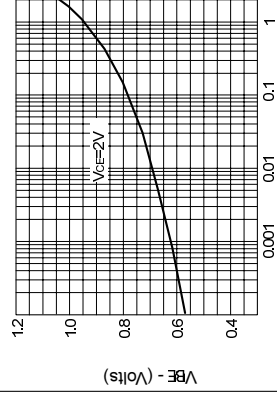
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h_{FE} v I_C
 I_C - Collector Current (Amps)



$V_{BE(on)}$ v I_C
 I_C - Collector Current (Amps)

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