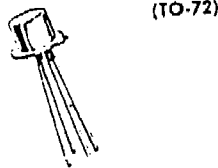


New Jersey Semi-Conductor Products, Inc.

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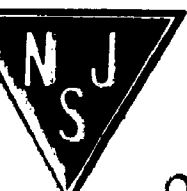
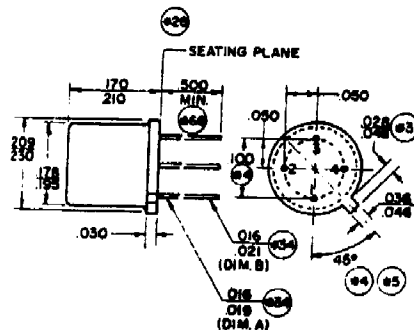
2N2723 thru **2N2725** (SILICON)



MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	2N2723 2N2724	2N2725	Unit
Collector Emitter Voltage	V_{CE2O}	60	45	Vdc
Collector-Base Voltage	V_{CB1}	80	45	Vdc
Emitter-Base Voltage	V_{E2B1}	12	10	Vdc
Collector Current	I_C	40	30	mAde
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	0.5		Watt
		2.9		mW/ $^\circ\text{C}$
Total Device Dissipation @ $T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$ Derate above 25°C	P_D	1.8		Watts
		1.0		Watt
		10.5		mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200		$^\circ\text{C}$

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NJ Semi-Conductors reserves the right to change test conditions, parameters limits and package dimensions without notice information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage (1) ($I_C = 10 \text{ mAdc}$, $I_{B1} = 0$)	2N2723, 2N2724 2N2725	V_{CE20}	60 4%	-	Vdc
Collector-Base Breakdown Voltage ($I_C = 10 \text{ } \mu\text{Ade}$, $I_{E2} = 0$)	2N2723, 2N2724 2N2725	V_{CB10}	80 4%	-	Vdc
Emitter-Base Breakdown Voltage ($I_{E2} = 10 \text{ } \mu\text{Ade}$, $I_C = 0$)	2N2723, 2N2724 2N2725	V_{EB10}	12 10	-	Vdc
Collector Cutoff Current ($V_{CB1} = 40 \text{ Vdc}$, $I_E = 0$) ($V_{CB1} = 40 \text{ Vdc}$, $I_E = 0$, $T_A = 150^\circ\text{C}$) ($V_{CB1} = 30 \text{ Vdc}$, $I_E = 0$) ($V_{CB1} = 30 \text{ Vdc}$, $I_E = 0$, $T_A = 150^\circ\text{C}$)	2N2723, 2N2724 2N2723, 2N2724 2N2725 2N2725	I_{CB10}	- - - -	0.01 10 0.002 2.0	μAde
Emitter Cutoff Current ($V_{BE2} = 10 \text{ Vdc}$, $I_C = 0$) ($V_{BE2} = 6.0 \text{ Vdc}$, $I_C = 0$)	2N2723, 2N2724 2N2725	I_{E210}	- -	10 1.0	μAde

ON CHARACTERISTICS

DC Current Gain ($I_C = 10 \text{ mAde}$, $V_{CE2} = 5.0 \text{ Vdc}$, $I_{B2} = 0$) ($I_C = 100 \text{ } \mu\text{Ade}$, $V_{CE2} = 5.0 \text{ Vdc}$, $I_{B2} = 0$)	2N2723 2N2724 2N2725	h_{FE}	2000 2500 2500	10,000 50,000 10,000	
Collector-Emitter Saturation Voltage ($I_C = 10 \text{ mAde}$, $I_{B1} = 1.0 \text{ mAde}$)		$V_{CE2(\text{sat})}$	-	1.0	Vdc
Base-Emitter Saturation Voltage ($I_C = 10 \text{ mAde}$, $I_{B1} = 1.0 \text{ mAde}$)		$V_{BE2(\text{sat})}$	-	1.7	Vdc

SMALL-SIGNAL CHARACTERISTICS

Current-Gain-Bandwidth Product (Each Unit) ($I_C = 10 \text{ mAde}$, V_{CE1} or $V_{CE2} = 10 \text{ Vdc}$, $f = 20 \text{ MHz}$)		f_T	100	-	MHz
Output Capacitance ($V_{CB1} = 10 \text{ Vdc}$, $I_{E2} = 0$, $f = 140 \text{ kHz}$)	2N2723, 2N2724	C_{ob1}	-	10	pF
Small-Signal Current Gain ($I_C = 10 \text{ mAde}$, $V_{CE2} = 5.0 \text{ Vdc}$, $f = 1.0 \text{ kHz}$) ($I_C = 10 \text{ } \mu\text{Ade}$, $V_{CE2} = 5.0 \text{ Vdc}$, $f = 1.0 \text{ kHz}$)	2N2723 2N2724 2N2725	h_{fe}	1500 5000 1500	15,000 60,000 15,000	
Noise Figure (Input Stage Only) ($I_C = 50 \text{ } \mu\text{Ade}$, $V_{CE} = 5.0 \text{ Vdc}$, $R_S = 3.0 \text{ k ohms}$, $f = 1.0 \text{ kHz}$, BW = 100 kHz)	2N2723	NF	-	10	dB
($I_C = 10 \text{ } \mu\text{Ade}$, $V_{CE} = 5.0 \text{ Vdc}$, $R_S = 10 \text{ k ohms}$, $f = 1.0 \text{ kHz}$, BW = 100 kHz)	2N2724		-	6.0	
($I_C = 3.0 \text{ } \mu\text{Ade}$, $V_{CE} = 5.0 \text{ Vdc}$, $R_S = 30 \text{ k ohms}$, $f = 1.0 \text{ kHz}$, BW = 100 kHz)	2N2725		-	6.0	