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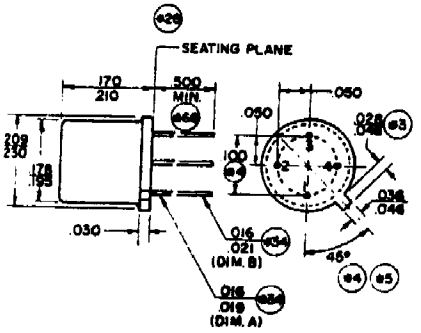
2N2723 thru 2N2725 (SILICON)

(TO-72)

MAXIMUM RATINGS (T_A = 25°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	mAdc
Total Device Dissipation @ T_A = 25°C	P_D	0.5		Watt
Derate above 25°C		2.9		mW/°C
Total Device Dissipation @ T_C = 25°C	P_D	1.8		Watts
T_C = 100°C		1.0		Watt
Derate above 25°C		10.5		mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200		°C

TO72



Characteristic		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage (1) (I_C = 10 mAdc, I_{B1} = 0)	2N2723, 2N2724 2N2725	BV_{CE2O}	60 45	-	Vdc
Collector-Base Breakdown Voltage (I_C = 10 μAdc, I_{E2} = 0)	2N2723, 2N2724 2N2725	BV_{CB1O}	80 45	-	Vdc
Emitter-Base Breakdown Voltage (I_{E2} = 10 μAdc, I_C = 0)	2N2723, 2N2724 2N2725	BV_{E2B1O}	12 10	-	Vdc
Collector Cutoff Current (V_{CB1} = 60 Vdc, I_E = 0)	2N2723, 2N2724	I_{CB1O}	-	0.01	μAdc
(V_{CB1} = 60 Vdc, I_E = 0, T_A = 150°C)	2N2723, 2N2724		-	10	
(V_{CB1} = 30 Vdc, I_E = 0)	2N2725		-	0.002	
(V_{CB1} = 30 Vdc, I_E = 0, T_A = 150°C)	2N2725		-	2.0	
Emitter Cutoff Current (V_{B1E2} = 10 Vdc, I_C = 0)	2N2723, 2N2724	I_{E2B1O}	-	10	nAdc
(V_{B1E2} = 6.0 Vdc, I_C = 0)	2N2725		-	1.0	
ON CHARACTERISTICS					
DC Current Gain (I_C = 10 mAdc, V_{CE2} = 5.0 Vdc, I_{B2} = 0)	2N2723 2N2724	h_{FE}	2000 3000	10,000 50,000	
(I_C = 100 μAdc, V_{CE2} = 5.0 Vdc, I_{B2} = 0)	2N2725		2000	10,000	
Collector-Emitter Saturation Voltage (I_C = 10 mAdc, I_{B1} = 1.0 mAdc)		$V_{CE2(sat)}$	-	1.0	Vdc
Base-Emitter Saturation Voltage (I_C = 10 mAdc, I_{B1} = 1.0 mAdc)		$V_{BE2(sat)}$	-	1.7	Vdc
SMALL-SIGNAL CHARACTERISTICS					
Current-Gain—Bandwidth Product (Each Unit) (I_C = 10 mAdc, V_{CE1} or V_{CE2} = 10 Vdc, f = 20 MHz)		f_T	100	-	MHz
Output Capacitance (V_{CB1} = 10 Vdc, I_{E2} = 0, f = 140 kHz)	2N2723, 2N2724	C_{ob1}	-	10	pF
Small-Signal Current Gain (I_C = 10 mAdc, V_{CE2} = 5.0 Vdc, f = 1.0 kHz)	2N2723 2N2724	h_{fe}	1500 3000	15,000 60,000	-
(I_C = 10 μAdc, V_{CE2} = 5.0 Vdc, f = 1.0 kHz)	2N2725		1500	15,000	
Noise Figure (Input Stage Only) (I_C = 50 μAdc, V_{CE} = 5.0 Vdc, R_S = 3.0 k ohms, f = 1.0 kHz, BW = 100 kHz)	2N2723	NF	-	10	dB
(I_C = 10 μAdc, V_{CE} = 5.0 Vdc, R_S = 10 k ohms, f = 1.0 kHz, BW = 100 kHz)	2N2724		-	6.0	
(I_C = 3.0 μAdc, V_{CE} = 5.0 Vdc, R_S = 30 k ohms, f = 1.0 kHz, BW = 100 kHz)	2N2725		-	6.0	