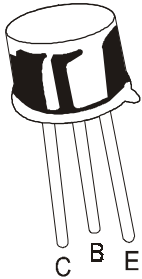


NPN HIGH VOLTAGE SILICON SWITCHING TRANSISTORS

**2N3724
2N3725**



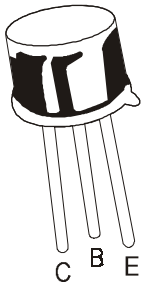
**TO-39
Metal Can Package**

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	2N3724	2N3725	UNITS
Collector Emitter Voltage	V_{CEO}	30	50	V
Collector Base Voltage	V_{CBO}	50	80	V
Emitter Base Voltage	V_{EBO}	6.0		V
Collector Current - Continuous	I_C	1.0		A
Power Dissipation @ $T_A=25^\circ C$	P_D	1.0		W
Derate Above $25^\circ C$		5.71		mW/ $^\circ C$
Power Dissipation@ $T_C=25^\circ C$	P_D	5.0		W
Derate Above $25^\circ C$		28.6		mW/ $^\circ C$
Operating And Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +200		$^\circ C$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ C$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	2N3724	2N3725	UNITS
Collector Emitter Voltage	V_{CEO}^*	$I_C=10mA, I_B=0$	>30	>50	V
Collector Emitter Voltage	V_{CES}	$I_C=10\mu A, V_{BE}=0$	>50	>80	V
Collector Base Voltage	V_{CBO}	$I_C=10\mu A, I_E=0$	>50	>80	V
Emitter Base Voltage	V_{EBO}	$I_E=10\mu A, I_C=0$	>6.0	>6.0	V
Collector Cut Off Current	I_{CBO}	$V_{CB}=40V, I_E=0$	<1.7	-	μA
		$V_{CB}=60V, I_E=0$	-	<1.7	μA
		$T_A=100^\circ C$ $V_{CB}=40V, I_E=0$	<120	-	μA
		$V_{CB}=60V, I_E=0$	-	<120	μA
Collector Cut Off Current	I_{CES}	$V_{CE}=50V, V_{EB}=0$	<10	-	μA
		$V_{CE}=80V, V_{EB}=0$	-	<10	μA
Base Current	I_B	$V_{CE}=50V, V_{EB}=0$	<10	-	μA
		$V_{CE}=80V, V_{EB}=0$	-	<10	μA



TO-39
Metal Can Package

ELECTRICAL CHARACTERISTICS (T_A=25° C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	2N3724	2N3725	UNITS
DC Current Gain	h _{FE} *	I _C =10mA, V _{CE} =1V	>30	>30	
		I _C =100mA, V _{CE} =1V	60 - 150	60 - 150	
		I _C =300mA, V _{CE} =1V	>40	>40	
		I _C =500mA, V _{CE} =1V	>35	>35	
		I _C =800mA, V _{CE} =2V	>25	>20	
		I _C =1A, V _{CE} =5V	>30	>25	
		T _A = - 55° C			
		I _C =100mA, V _{CE} =1V	>30	>30	
		I _C =500mA, V _{CE} =1V	>20	>20	
Collector Emitter Saturation Voltage	V _{CE(Sat)} *	I _C =10mA, I _B =1mA	<0.25	<0.25	V
		I _C =100mA, I _B =10mA	<0.20	<0.26	
		I _C =300mA, I _B =30mA	<0.32	<0.40	
		I _C =500mA, I _B =50mA	<0.42	<0.52	
		I _C =800mA, I _B =80mA	<0.65	<0.80	
		I _C =1A, I _B =100mA	<0.75	<0.95	
Base Emitter Saturation Voltage	V _{BE(Sat)} *	I _C =10mA, I _B =1mA	<0.76	<0.76	V
		I _C =100mA, I _B =10mA	<0.86	<0.86	
		I _C =300mA, I _B =30mA	<1.1	<1.1	
		I _C =500mA, I _B =50mA	0.8 - 1.1	0.8 - 1.1	
		I _C =800mA, I _B =80mA	<1.5	<1.5	
		I _C =1A, I _B =100mA	<1.7	<1.7	

SMALL SIGNAL CHARACTERISTICS

Current Gain Bandwidth Product	f _{T**}	I _C =50mA, V _{CE} =10V f=100MHz	>300	>300	MHz
Output Capacitance	C _{obo}	V _{CB} =10V, I _E =0, f=1MHz	<12	<10	pF
Input Capacitance	C _{ibo}	V _{EB} =0.5V, I _C =0, f=1MHz	typ 85	typ 85	pF

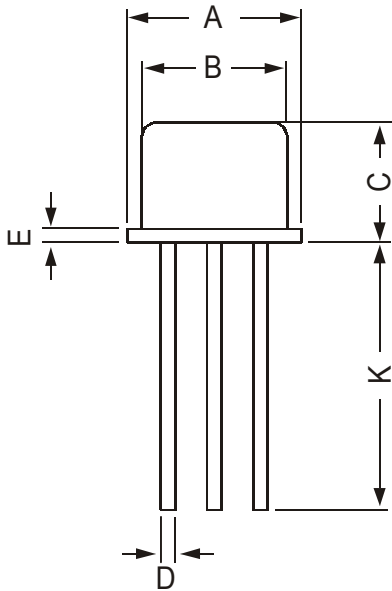
*Pulse Test: Pulse Width ≤300μs, Duty Cycle ≤1%

** f_T = |h_{fe}| · f_{test}

SWITCHING CHARACTERISTICS

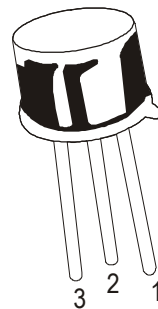
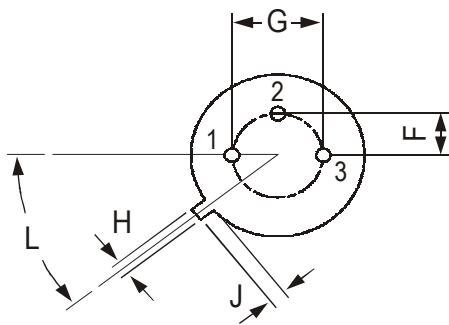
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Delay Time	t _d	V _{CC} =30V, V _{BE} (Off)=3.8V	-	10	ns
Rise Time	t _r	I _C =500mA, I _{B1} =50mA	-	30	
Turn On Time	t _{on}		-	35	
Storage Time	t _s	V _{CC} =30V, I _C =500mA	-	50	ns
Fall Time	t _f	I _{B1} =I _{B2} =50mA	-	25	
Turn Off Time	t _{off}		-	60	

TO-39 Metal Can Package



All dimensions are in mm

DIM	MIN	MAX
A	8.50	9.39
B	7.74	8.50
C	6.09	6.60
D	0.40	0.53
E	—	0.88
F	2.41	2.66
G	4.82	5.33
H	0.71	0.86
J	0.73	1.02
K	12.70	—
L	42 DEG	48 DEG



PIN CONFIGURATION
1. EMITTER
2. BASE
3. COLLECTOR

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-39	500 pcs/polybag	540 gm/500 pcs	3" x 7.5" x 7.5"	20K	17" x 15" x 13.5"	32K	40 kgs

Disclaimer

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