DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

2N760(A)

SILICON NPN LOW POWER TRANSISTORS

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

Rating	Symbol	2N760	2N760A	Unit
Collector-emitter voltage	V_{CEO}	45	60	V
Collector-base voltage	V_{CB}	45	60	V
Emitter-base voltage	V_{EB}	8.0		V
Collector current	I_C	100		mA
Total device dissipation @ T_A = 25°C **Derate above 25°C**	P_D	500 2.86		mW mW/°C
Operating and storage temperature range	T_J, T_{stg}	-65 to +200		°C
Soldering Temperature, 10 seconds	T_{solder}	260		°C

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

Characteristic		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector-emitter breakdown voltage (I_C = 1.0mAdc, I_B = 0)	2N760 2N760A	BV_{CEO}	45 60	- -	V
Collector-base breakdown voltage (I_C = 50µAdc, I_E = 0)	2N760 2N760A	BV_{CBO}	45 60	- -	V
Emitter-base breakdown voltage (I_E = 100µAdc, I_C = 0)		BV_{EBO}	8.0	-	V
Collector cutoff current (V_{CB} = 30V, I_E = 0) (V_{CB} = 30V, I_E = 0, T_A = 150°C)	2N760 2N760A Both	I_{CBO}	- - -	0.2 0.1 10	µAdc
Emitter cutoff current (V_{BE} = 5.0V, I_C = 0)	2N760 2N760A	I_{EBO}	- -	10 1.0	µAdc
ON CHARACTERISTICS					
Collector-emitter saturation voltage (I_C = 10mAdc, I_B = 1.0mAdc)		$V_{CE(sat)}$	-	1.0	V
Base-emitter voltage (I_C = 10mAdc, I_B = 1.0mAdc)		V_{BE}	0.6	1.1	V
SMALL SIGNAL CHARACTERISTICS					
Common-base cutoff frequency (I_E = 1.0mAdc, V_{CB} = 5.0V)		$f_{\alpha b}$	50	-	MHz
Output capacitance (V_{CB} = 5.0Vdc, I_E = 0, f = 140kHz)		C_{ob}	-	8.0	pF

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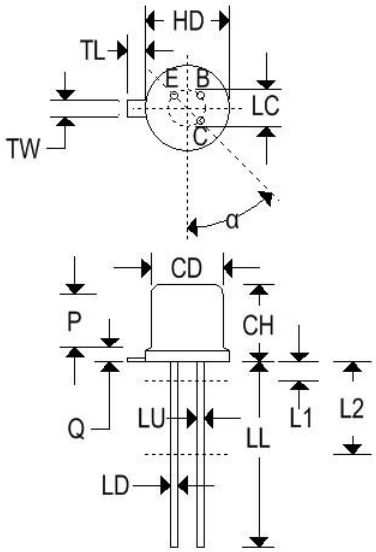
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic		Symbol	Min	Max	Unit
Small-signal current gain					
(I_C = 0.1mAdc, V_{CE} = 5.0Vdc, f = 1.0kHz)	2N760A		40	-	
(I_C = 1.0mAdc, V_{CE} = 5.0V, f = 1.0kHz)	2N760, 2N760A	h_{fe}	76	333	-
(I_C = 10Madc, V_{CE} = 5.0Vdc, f = 1.0kHz)	2N760A		100	-	
(I_C = 10mAdc, V_{CE} = 5.0Vdc, f = 1.0kHz, TA = -55°C)	2N760A		50	-	
Input impedance (V_{CB} = 5.0Vdc, I_E = 1.0mAdc, f = 1.0kHz)		h_{ib}	-	80	Ohms
Reverse voltage (V_{CB} = 5.0Vdc, I_E = 1.0mAdc, f = 1.0kHz)		h_{rb}	-	1000	$X10^{-6}$
Output conductance (V_{CB} = 5.0Vdc, I_E = 1.0mAdc, f = 1.0kHz)		h_{ob}	-	1.0	µmho

MECHANICAL CHARACTERISTICS

Case	TO-18
Marking	Alpha-numeric
Polarity	See below



TO-18				
Dim	**Inches**		**Millimeters**	
	Min	**Max**	**Min**	**Max**
CD	0.178	0.195	4.520	4.950
CH	0.170	0.210	4.320	5.330
HD	0.209	0.230	5.310	5.840
LC	0.100 TP		2.540 TP	
LD	0.016	0.021	0.410	0.530
LL	0.500	0.750	12.700	19.050
LU	0.016	0.019	0.410	0.480
L_1	-	0.050	-	1.270
L_2	0.250	-	6.350	-
P	0.100	-	2.540	-
Q	-	0.040	-	1.020
TL	0.028	0.048	0.710	1.220
TW	0.036	0.046	0.910	1.170
r	-	0.010	-	0.025
α	45°TP		45°TP	