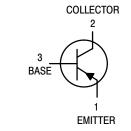
Amplifier Transistors

PNP Silicon



ON Semiconductor™

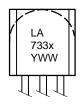
http://onsemi.com





TO-92 CASE 29 STYLE 14

MARKING DIAGRAMS



LA733x = Specific Device Code

x = P or Q Y = Year WW = Work Week

ORDERING INFORMATION

Device	Package	Shipping	
LA733P	TO-92	5000 Units/Box	
LA733Q	TO-92	5000 Units/Box	

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	-48	Vdc
Collector-Base Voltage	V _{CBO}	-60	Vdc
Emitter-Base Voltage	V _{EBO}	-5.0	Vdc
Collector Current – Continuous	I _C	-100	mAdc
Total Device Dissipation @ T _A = 25°C Derate above 25°C	P _D	625 5.0	mW mW/°C
Total Device Dissipation @ T _C = 25°C Derate above 25°C	P _D	1.5 12	Watts mW/°C
Operating and Storage Junction Temperature Range	T _J , T _{stg}	–55 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	200	°C/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	83.3	°C/W

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

Characteristic	Symbol	Min	Тур	Max	Unit
Collector–Emitter Breakdown Voltage $(I_C = -1.0 \text{ mAdc}, I_B = 0)$	V _{(BR)CEO}	-48	-	-	Vdc
Collector–Base Breakdown Voltage ($I_C = -10 \mu Adc$, $I_E = 0$)	V _{(BR)CBO}	-60	_	-	Vdc
Emitter–Base Breakdown Voltage ($I_E = -10 \mu Adc, I_C = 0$)	V _{(BR)EBO}	-5.0	_	-	Vdc
Collector–Base Leakage Current (V _{CB} = -60 V)	Ісво	_	_	-100	nAdc
Emitter–Base Leakage Current $(V_{EB} = -5.0 \text{ V}, I_{C} = 0)$	I _{EBO}	-	-	-100	nAdc
Collector–Emitter Leakage Current (V _{CE} = -50 V)	I _{CEO}	-	_	-1.0	μА
ON CHARACTERISTICS					
DC Current Gain $(I_{C} = -1.0 \text{ mAdc}, V_{CE} = -6.0 \text{ Vdc}) \\ \text{LA733P} \\ \text{LA733Q}$	h _{FE}	200 135	_ _	400 270	_
Collector–Emitter Saturation Voltage (I _C = -10 mAdc, I _B = -1.0 mAdc)	V _{CE(sat)}	-	_	-0.3	Vdc
Base–Emitter Saturation Voltage $(I_C = -10 \text{ mAdc}, I_B = -1.0 \text{ mAdc})$	V _{BE(sat)}	-	_	-0.9	Vdc
Base–Emitter On Voltage $(I_C = -1.0 \text{ mAdc}, V_{CE} = -6.0 \text{ Vdc})$	V _{BE(on)}	-0.55	-	-0.68	Vdc
DYNAMIC CHARACTERISTICS					
Current–Gain – Bandwidth Product (I _C = -10 mAdc, V _{CE} = -6.0 Vdc, f = 20 MHz)	f _T	100	_	450	MHz
Common–Base Output Capacitance (V _{CB} = -60 Vdc, I _C = 0, f = 1.0 MHz)	C _{ob}	-	_	7.0	pF
Noise Figure $ (I_C = -0.3 \text{ mAdc}, V_{CE} = -6.0 \text{ Vdc}, \\ R_G = 10 \text{ k}\Omega, f = 100 \text{ mHz}) $	NF	-	_	18	dB

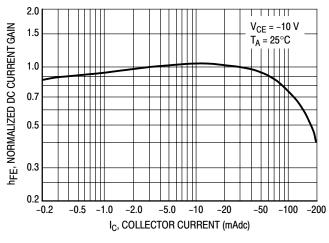


Figure 1. Normalized DC Current Gain

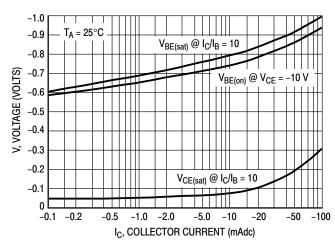


Figure 2. "Saturation" and "On" Voltages

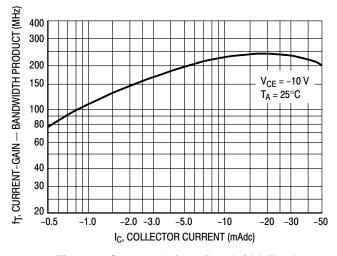


Figure 3. Current-Gain — Bandwidth Product

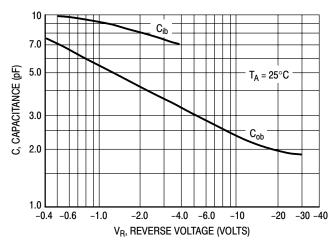


Figure 4. Capacitances

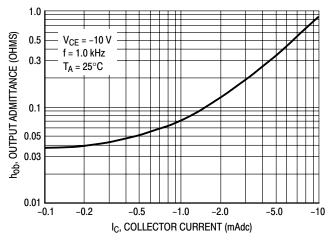


Figure 5. Output Admittance

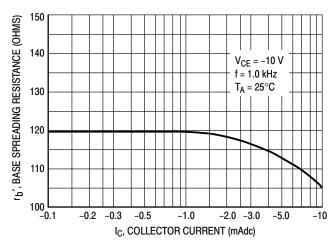
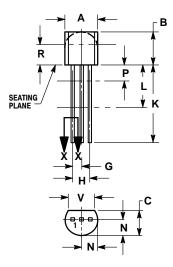


Figure 6. Base Spreading Resistance

PACKAGE DIMENSIONS

TO-92 (TO-226) CASE 29-11 **ISSUE AL**





NOTES:

- DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.

- 114-30M, 1902.
 CONTROLLING DIMENSION: INCH.
 CONTOUR OF PACKAGE BEYOND DIMENSION R
 IS UNCONTROLLED.
 LEAD DIMENSION IS UNCONTROLLED IN P AND
- BEYOND DIMENSION K MINIMUM

	INCHES		MILLIN	IETERS
DIM	MIN	MAX	MIN	MAX
Α	0.175	0.205	4.45	5.20
В	0.170	0.210	4.32	5.33
С	0.125	0.165	3.18	4.19
D	0.016	0.021	0.407	0.533
G	0.045	0.055	1.15	1.39
Н	0.095	0.105	2.42	2.66
J	0.015	0.020	0.39	0.50
K	0.500		12.70	
L	0.250		6.35	
N	0.080	0.105	2.04	2.66
P		0.100		2.54
R	0.115		2.93	
٧	0.135		3.43	

STYLE 14:

PIN 1. EMITTER

COLLECTOR 2.

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