

Amplifier Transistors

PNP Silicon



ON Semiconductor™

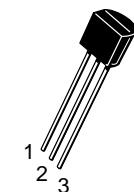
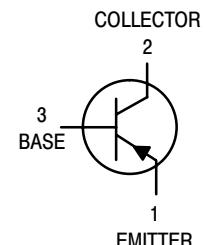
<http://onsemi.com>

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 @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	625 5.0	mW mW/ $^\circ\text{C}$
Total Device Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	1.5 12	Watts mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

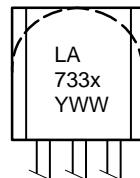
THERMAL CHARACTERISTICS

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



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

LA733P, LA733Q

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

Characteristic	Symbol	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage ($I_C = -1.0 \text{ mA}_\text{dc}$, $I_B = 0$)	$V_{(\text{BR})\text{CEO}}$	-48	-	-	Vdc
Collector-Base Breakdown Voltage ($I_C = -10 \mu\text{A}_\text{dc}$, $I_E = 0$)	$V_{(\text{BR})\text{CBO}}$	-60	-	-	Vdc
Emitter-Base Breakdown Voltage ($I_E = -10 \mu\text{A}_\text{dc}$, $I_C = 0$)	$V_{(\text{BR})\text{EBO}}$	-5.0	-	-	Vdc
Collector-Base Leakage Current ($V_{CB} = -60 \text{ V}$)	I_{CBO}	-	-	-100	nA dc
Emitter-Base Leakage Current ($V_{EB} = -5.0 \text{ V}$, $I_C = 0$)	I_{EBO}	-	-	-100	nA dc
Collector-Emitter Leakage Current ($V_{CE} = -50 \text{ V}$)	I_{CEO}	-	-	-1.0	μA

ON CHARACTERISTICS

DC Current Gain ($I_C = -1.0 \text{ mA}_\text{dc}$, $V_{CE} = -6.0 \text{ Vdc}$)	LA733P LA733Q	h_{FE}	200 135	-	400 270	-
Collector-Emitter Saturation Voltage ($I_C = -10 \text{ mA}_\text{dc}$, $I_B = -1.0 \text{ mA}_\text{dc}$)		$V_{CE(\text{sat})}$	-	-	-0.3	Vdc
Base-Emitter Saturation Voltage ($I_C = -10 \text{ mA}_\text{dc}$, $I_B = -1.0 \text{ mA}_\text{dc}$)		$V_{BE(\text{sat})}$	-	-	-0.9	Vdc
Base-Emitter On Voltage ($I_C = -1.0 \text{ mA}_\text{dc}$, $V_{CE} = -6.0 \text{ Vdc}$)		$V_{BE(\text{on})}$	-0.55	-	-0.68	Vdc

DYNAMIC CHARACTERISTICS

Current-Gain – Bandwidth Product ($I_C = -10 \text{ mA}_\text{dc}$, $V_{CE} = -6.0 \text{ Vdc}$, $f = 20 \text{ MHz}$)		f_T	100	-	450	MHz
Common-Base Output Capacitance ($V_{CB} = -60 \text{ Vdc}$, $I_C = 0$, $f = 1.0 \text{ MHz}$)		C_{ob}	-	-	7.0	pF
Noise Figure ($I_C = -0.3 \text{ mA}_\text{dc}$, $V_{CE} = -6.0 \text{ Vdc}$, $R_G = 10 \text{ k}\Omega$, $f = 100 \text{ mHz}$)		NF	-	-	18	dB

LA733P, LA733Q

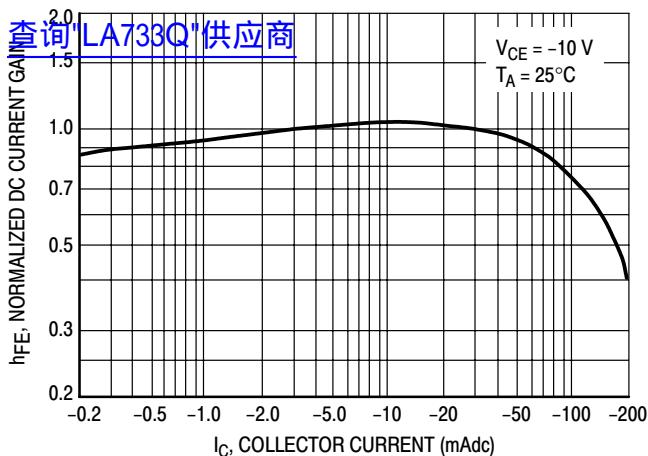


Figure 1. Normalized DC Current Gain

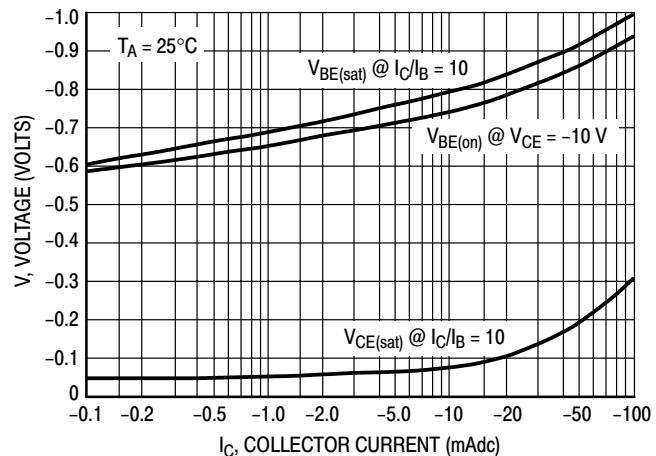


Figure 2. "Saturation" and "On" Voltages

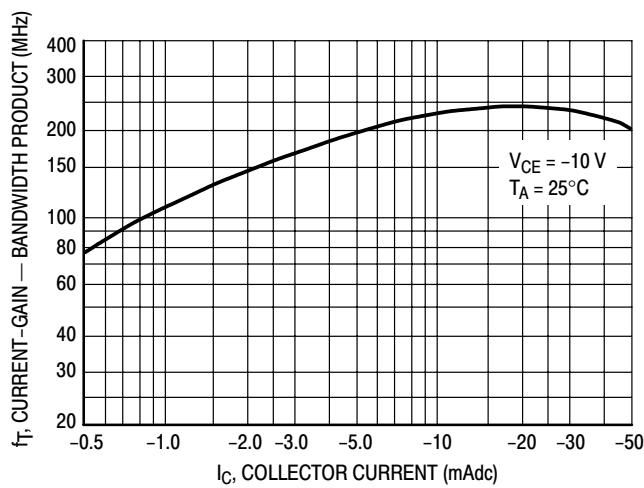


Figure 3. Current—Gain — Bandwidth Product

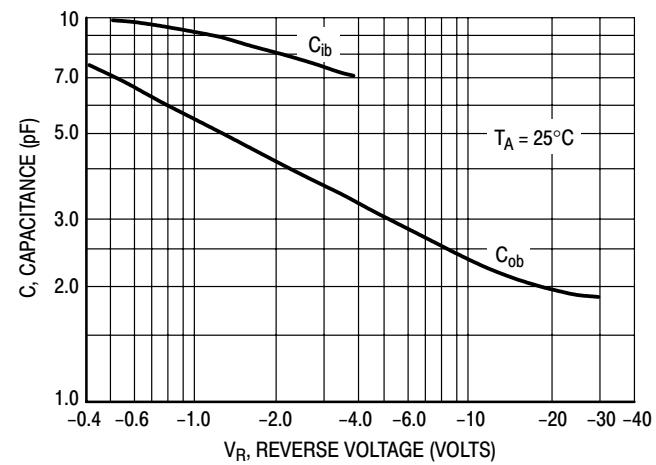


Figure 4. Capacitances

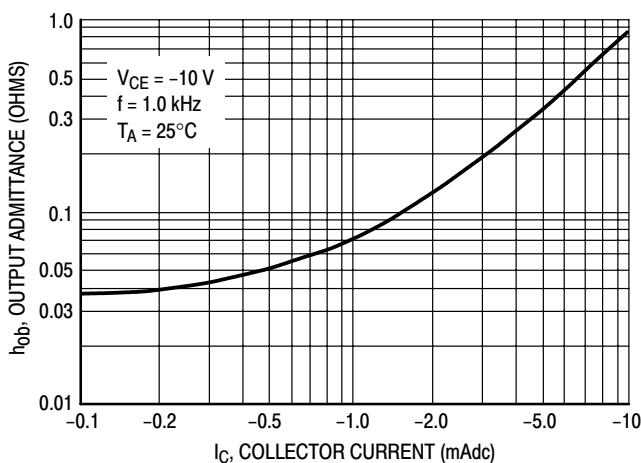


Figure 5. Output Admittance

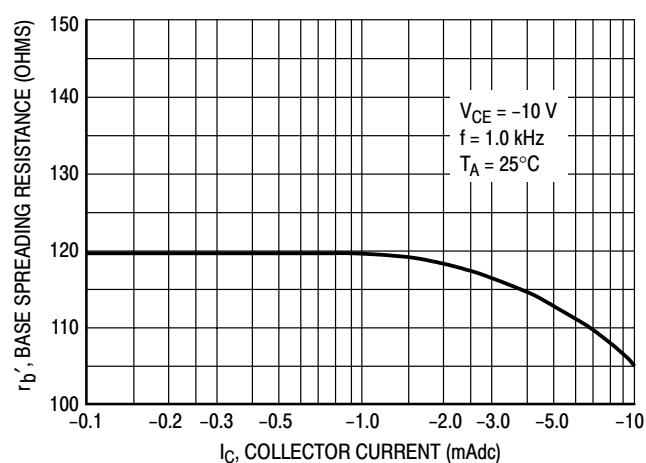


Figure 6. Base Spreading Resistance

LA733P, LA733Q

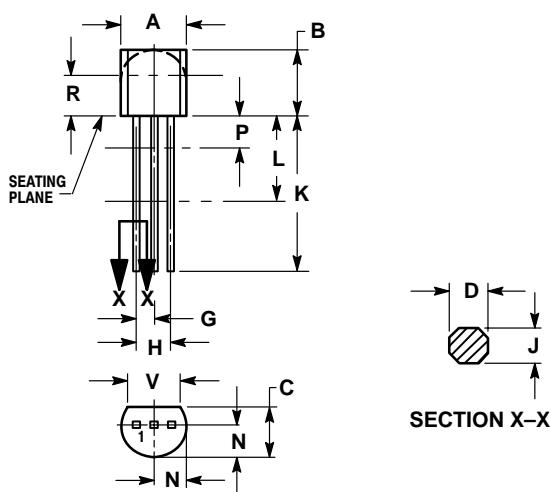
[查询"LA733Q"供应商](#)

PACKAGE DIMENSIONS

TO-92 (TO-226)

CASE 29-11

ISSUE AL



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED.
4. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.175	0.205	4.45	5.20
B	0.170	0.210	4.32	5.33
C	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
H	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	---
V	0.135	---	3.43	---

STYLE 14:

1. Emitter
2. Collector
3. Base

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