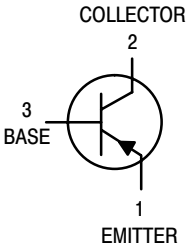
LA733P, LA733Q

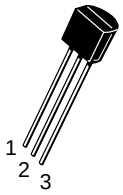
Amplifier Transistors

PNP Silicon

ON Semiconductor™

http://onsemi.com





TO–92
CASE 29
STYLE 14

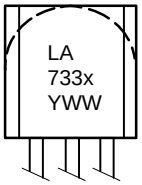
MAXIMUM RATINGS

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

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

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

Characteristic		Symbol	Min	Typ	Max	Unit
Collector–Emitter Breakdown Voltage (I_C = –1.0 mAdc, I_B = 0)		$V_{(BR)CEO}$	–48	–	–	Vdc
Collector–Base Breakdown Voltage (I_C = –10 μAdc, I_E = 0)		$V_{(BR)CBO}$	–60	–	–	Vdc
Emitter–Base Breakdown Voltage (I_E = –10 μAdc, I_C = 0)		$V_{(BR)EBO}$	–5.0	–	–	Vdc
Collector–Base Leakage Current (V_{CB} = –60 V)		I_{CBO}	–	–	–100	nAdc
Emitter–Base Leakage Current (V_{EB} = –5.0 V, I_C = 0)		I_{EBO}	–	–	–100	nAdc
Collector–Emitter Leakage Current (V_{CE} = –50 V)		I_{CEO}	–	–	–1.0	μA
ON CHARACTERISTICS						
DC Current Gain (I_C = –1.0 mAdc, V_{CE} = –6.0 Vdc)	LA733P 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 mAdc, I_B = –1.0 mAdc)		$V_{BE(sat)}$	–	–	–0.9	Vdc
Base–Emitter On Voltage (I_C = –1.0 mAdc, V_{CE} = –6.0 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 mAdc, V_{CE} = –6.0 Vdc, R_G = 10 kΩ, f = 100 mHz)		NF	–	–	18	dB

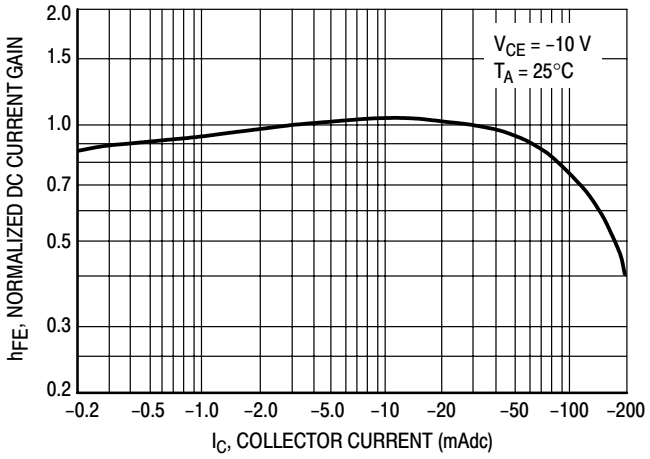


Figure 1. Normalized DC Current Gain

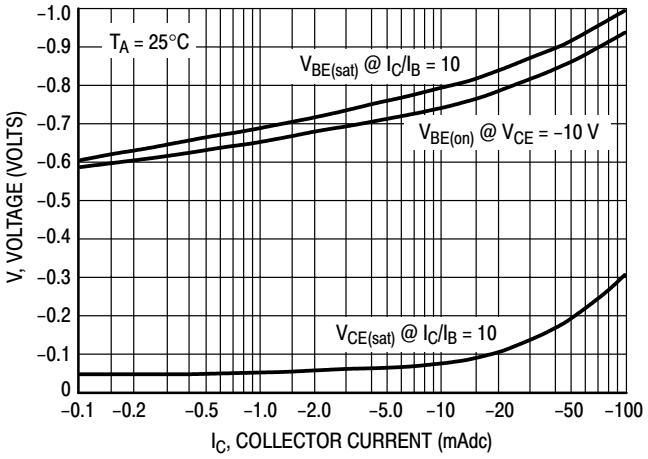


Figure 2. “Saturation” and “On” Voltages

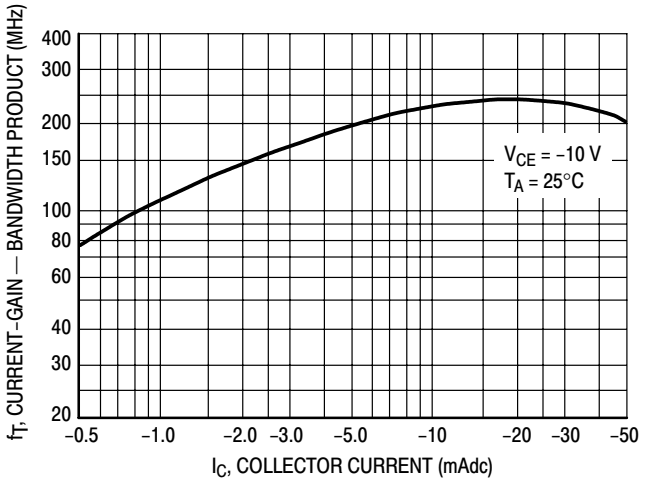


Figure 3. Current–Gain — Bandwidth Product

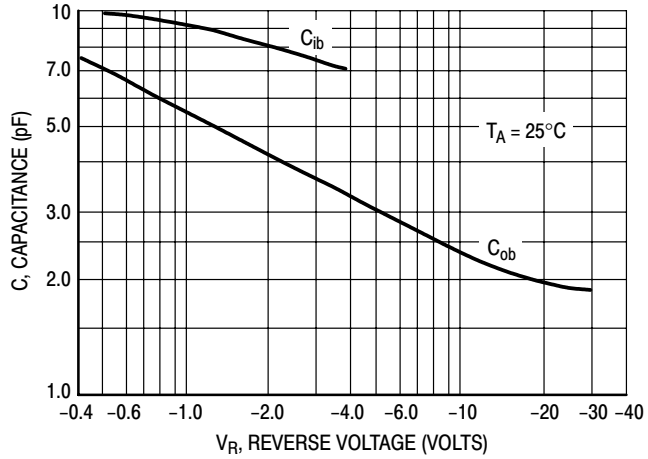


Figure 4. Capacitances

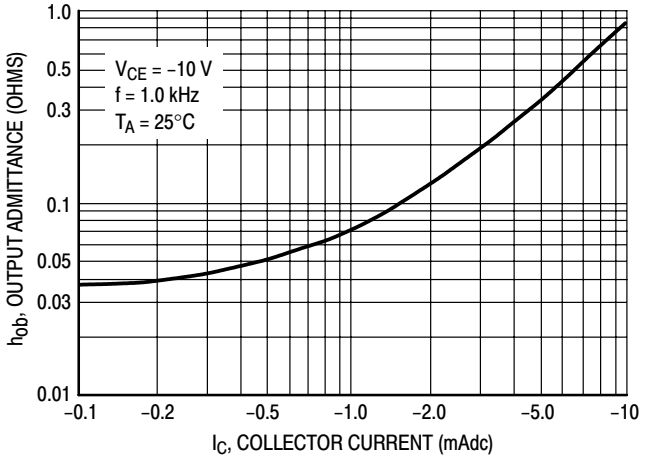


Figure 5. Output Admittance

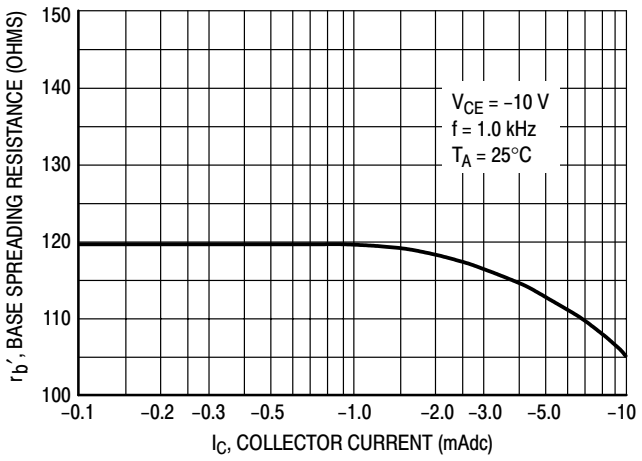
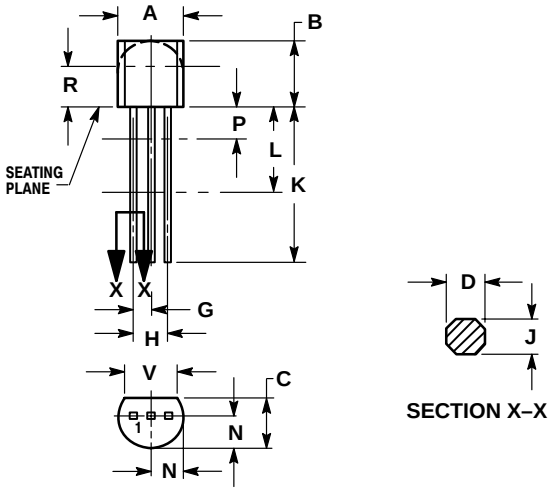


Figure 6. Base Spreading Resistance

PACKAGE DIMENSIONS

TO–92 (TO–226)
CASE 29–11
ISSUE AL



NOTES:
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.

	INCHES		MILLIMETERS	
DIM	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:
PIN 1. EMITTER
2. COLLECTOR
3. BASE

PUBLICATION ORDERING INFORMATION

Literature Fulfillment:
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