# WILLAS

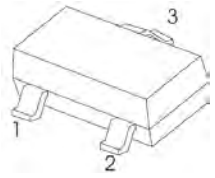
RoHS COMPLIANT

## SOT-23 Plastic-Encapsulate Transistors

**A733**

TRANSISTOR (PNP)

**SOT-23**




1. BASE
2. EMITTER
3. COLLECTOR

**FEATURE**

- Collector-Base Voltage
- **Pb-Free package is available**
  RoHS product for packing code suffix ”G”
  Halogen free product for packing code suffix “H”
- **Moisture Sensitivity Level 1**

**MAXIMUM RATINGS($T_a$=25℃ unless otherwise noted)**

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | -60 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | -50 | V |
| $V_{EBO}$ | Emitter-Base Voltage | -5 | V |
| $I_C$ | Collector Current -Continuous | -150 | mA |
| $P_C$ | Collector Power Dissipation | 200 | mW |
| $T_j$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature | -55-150 | ℃ |

**ELECTRICAL CHARACTERISTICS ($T_a$=25℃ unless otherwise specified)**

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| **Collector-base breakdown voltage** | $V_{(BR)CBO}$ | $I_C$= -5uA,$I_E$=0 | -60 | | | V |
| **Collector-emitter breakdown voltage** | $V_{(BR)CEO}$ | $I_C$= -1mA , $I_B$=0 | -50 | | | V |
| **Emitter-base breakdown voltage** | $V_{(BR)EBO}$ | $I_E$= -50uA, $I_C$=0 | -5 | | | V |
| **Collector cut-off current** | $I_{CBO}$ | $V_{CB}$= -60 V , $I_E$=0 | | | -0.1 | uA |
| **Emitter cut-off current** | $I_{EBO}$ | $V_{EB}$= -5 V , $I_C$=0 | | | -0.1 | uA |
| **DC current gain** | $h_{FE}$ | $V_{CE}$= -6 V, $I_C$= -1mA | 120 | | 475 | |
| **Collector-emitter saturation voltage** | $V_{CE(sat)}$ | $I_C$= -100mA, $I_B$=- 10mA | | -0.18 | -0.3 | V |
| **Base-emitter voltage** | $V_{BE(on)}$ | $V_{CE}$=-6V,$I_C$=-1.0mA | -0.58 | -0.62 | -0.68 | V |
| **Transition frequency** | $f_T$ | $V_{CE}$=-6V,$I_C$=-10mA | 50 | | | MHz |
| **Collector output capacitance** | $C_{ob}$ | $V_{CB}$=-10V,$I_E$=0,f=1MH$_Z$ | | 4.5 | 7 | pF |
| **Noise figure** | NF | $V_{CE}$=-6V,$I_C$=-0.3mA, Rg=10kΩ,f=100H$_Z$ | | 6 | 20 | dB |

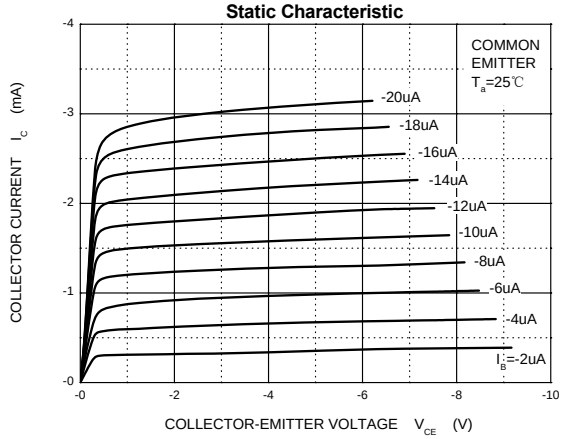
**CLASSIFICATION OF $h_{FE}$**

| **Rank** | **L** | **H** |
|---|---|---|
| **Range** | 120-220 | 220-475 |
| **MARKING** | **CS** | |

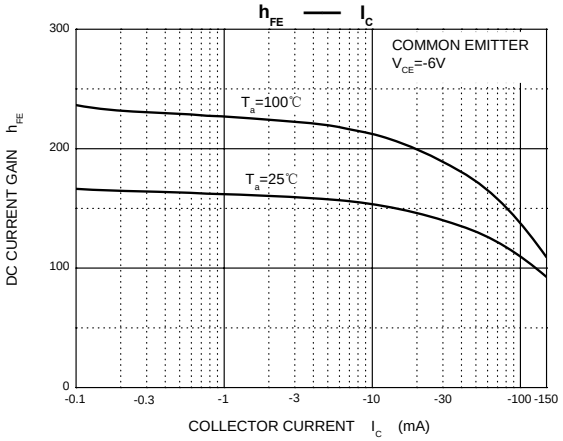
# SOT-23 Plastic-Encapsulate Transistors

## Typical Characterisitics

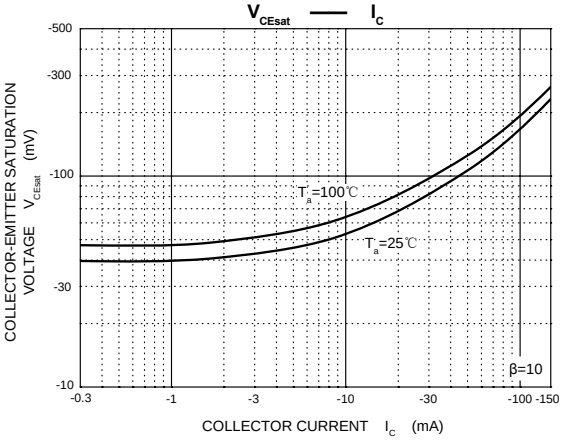
Static Characteristic



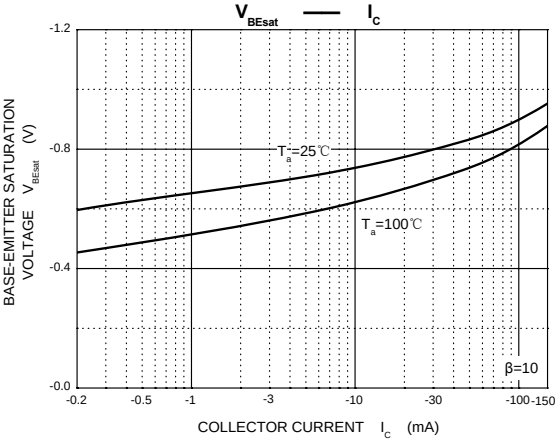

$h_{FE}$ — $I_C$



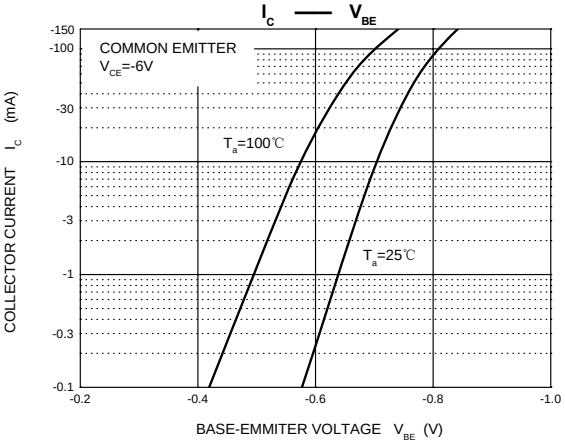

$V_{CEsat}$ — $I_C$



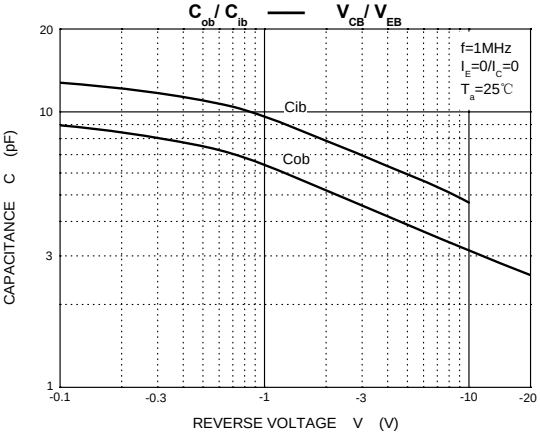

$V_{BEsat}$ — $I_C$



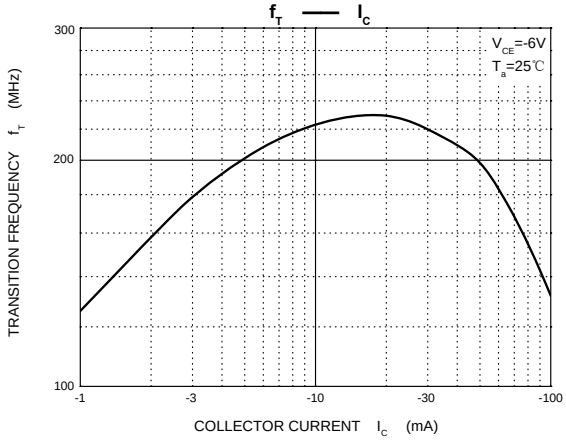

$I_C$ — $V_{BE}$



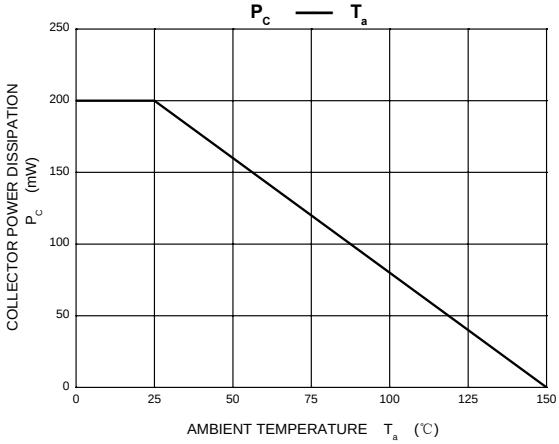

$C_{ob}$ / $C_{ib}$ — $V_{CB}$ / $V_{EB}$




$f_T$ — $I_C$

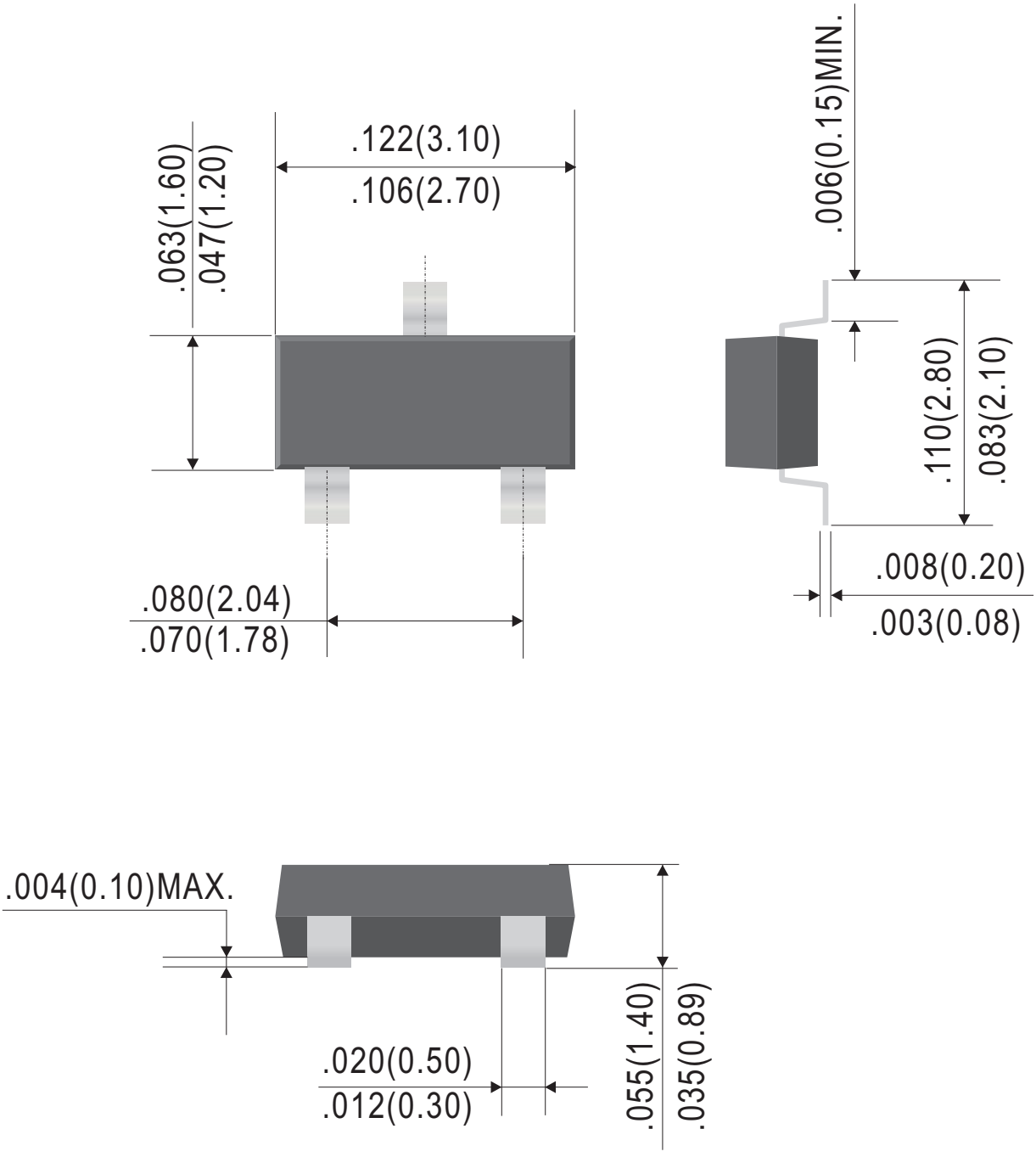



$P_C$ — $T_a$



# Outline Drawing

# SOT-23




Dimensions in inches and (millimeters)

Rev.D

# WILLAS

RoHS COMPLIANT

## SOT-23 Plastic-Encapsulate Transistors

**A733**

### Ordering Information:

| Device PN | Packing |
|---|---|
| A733 x(3)-T(1)G(2)-WS | Tape&Reel: 3 Kpcs/Reel |

Note: (1) Packing code, Tape & Reel Packing

(2) RoHS product for packing code suffix "G"；Halogen free product for packing code suffix "H"

(3) CLASSIFICATION OF $h_{FE}$ RANK


*****Disclaimer*****

WILLAS reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. WILLAS or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on WILLAS data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. WILLAS does not assume any liability arising out of the application or use of any product or circuit.

WILLAS products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of WILLAS. Customers using or selling WILLAS components for use in such applications do so at their own risk and shall agree to fully indemnify WILLAS Inc and its subsidiaries harmless against all claims, damages and expenditures.

ENTEGRECİ

Bu belge www.entegreci.com üzerinden sunulmaktadır.

# Elektronik komponent tedarikinde Entegreci

Entegreci, Eskişehir merkezli, Türkiye geneline satış yapan bir elektronik komponent mağazasıdır. Entegreler (IC), mikrodenetleyiciler, transistörler, diyotlar, pasif elemanlar, konnektörler, modüller ve geliştirme kartları tek adetten seri üretim adetlerine kadar satılır. Ürün sayfalarında güncel stok durumunu, fiyatı ve datasheet bağlantısını bulabilirsiniz.

### Parça koduyla arama

Üretici parça numarasını yazın; stok ve fiyatı hemen görün.

**www.entegreci.com**

### Ürün kategorileri

Entegreden kapasitöre tüm elektronik komponent kategorileri.

**Kategorilere göz atın**

### Üreticiler

Aradığınız üreticinin ürünlerini tek sayfada inceleyin.

**Üreticileri görün**

### Toplu alım ve teklif

Listede olmayan ya da yüksek adetli parçalar için teklif isteyin.

**Teklif isteyin**

**www.entegreci.com** | **destek@entegreci.com** | **0850 305 90 34**

Entegreci is an online electronic components store based in Türkiye. Search by manufacturer part number to see stock, prices and datasheets for integrated circuits, microcontrollers, transistors, passive components and connectors, or request a quote for parts that are not listed.

Bu sayfa Entegreci tarafından eklenmiştir. Belgenin önceki sayfaları asıl yayıncısına aittir ve içeriği değiştirilmemiştir; en güncel sürüm için belgenin yayıncısına başvurun.