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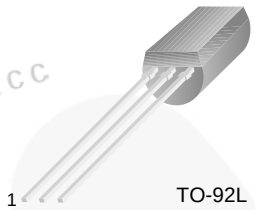
Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

October 2014

KSA1013
PNP Epitaxial Silicon Transistor

Features

- Color TV Audio Output
- Color TV Vertical Deflection Output



TO-92L

1. Emitter 2. Collector 3. Base

Ordering Information

Part Number	Top Mark	Package	Packing Method
KSA1013YBU	A1013	TO-92 3L	Bulk
KSA1013OBU			
KSA1013YTA			Ammo
KSA1013OTA			

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-160	V
V_{CEO}	Collector-Emitter Voltage	-160	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-1	A
I_B	Base Current	-0.5	A
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Thermal Characteristics[1]

Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Value	Unit
P_D	Power Dissipation	900	mW
	Derate Above T_A = 25°C	7.2	mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient	139	°C/W

Note:

1. PCB size: FR-4, 76 mm x 114 mm x 1.57 mm (3.0 inch x 4.5 inch x 0.062 inch) with minimum land pattern size.

Electrical Characteristics

Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-Off Current	V_{CB} = -150 V, I_E = 0			-1	μA
I_{EBO}	Emitter Cut-Off Current	V_{EB} = -6 V, I_C = 0			-1	μA
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = -10 mA, I_B = 0	-160			V
h_{FE}	DC Current Gain	V_{CE} = -5 V, I_C = -200 mA	60		320	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = -500 mA, I_B = -50 mA			-1.5	V
V_{BE}(on)	Base-Emitter On Voltage	V_{CE} =- 5 V, I_C = -5 mA	-0.45		-0.75	V
f_T	Current Gain Bandwidth Product	V_{CE} = -5 V, I_C = -200 mA	15	50		MHz
C_{ob}	Output Capacitance	V_{CB} = -10 V, I_E = 0, f = 1 MHz			35	pF

h_{FE} Classification

Classification	R	O	Y
h_{FE}	60 ~ 120	100 ~ 200	160 ~ 320

Typical Performance Characteristics

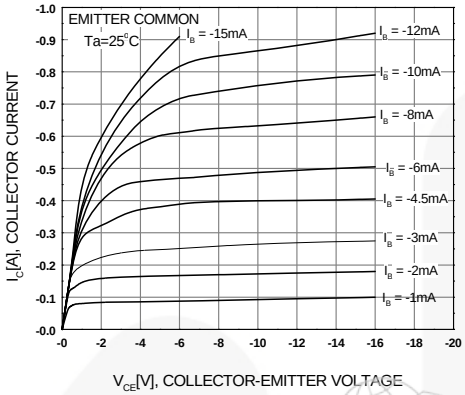


Figure 1. Static Characteristic

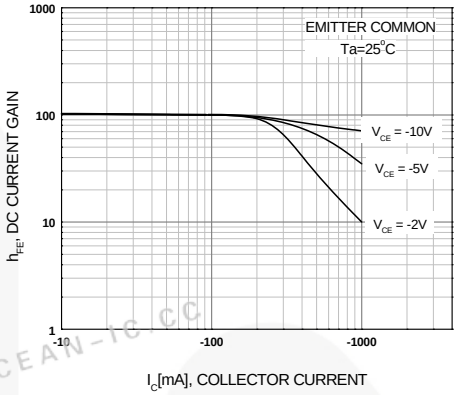


Figure 2. DC Current Gain

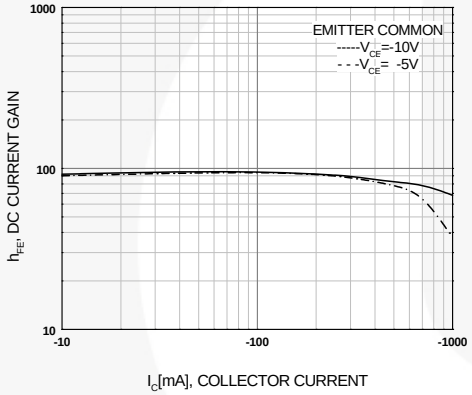


Figure 3. DC Current Gain

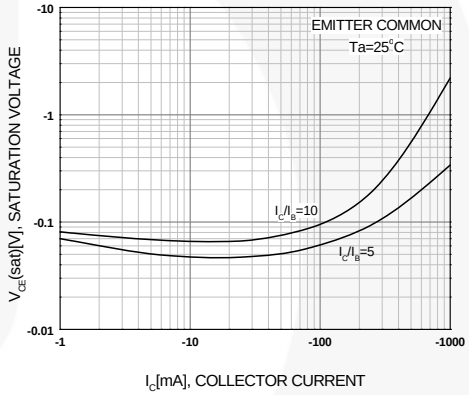


Figure 4. Collector-Emitter Saturation Voltage

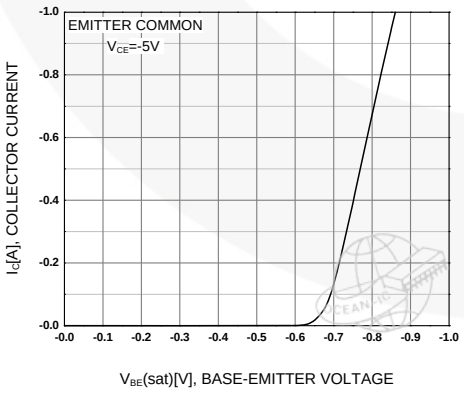


Figure 5. Base-Emitter On Voltage

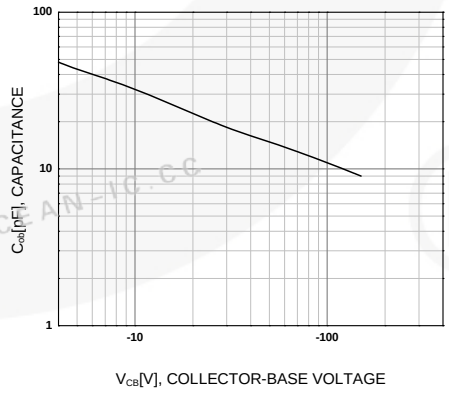


Figure 6. Collector Output Capacitance

Typical Performance Characteristics (Continued)

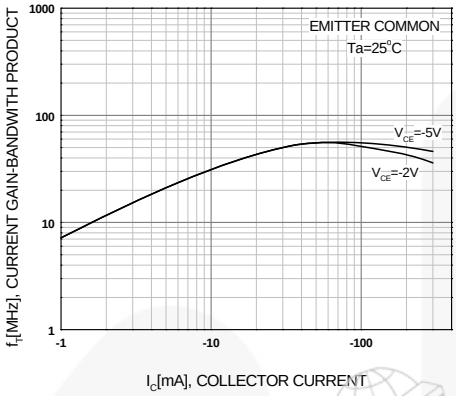


Figure7. Current Gain Bandwidth Product

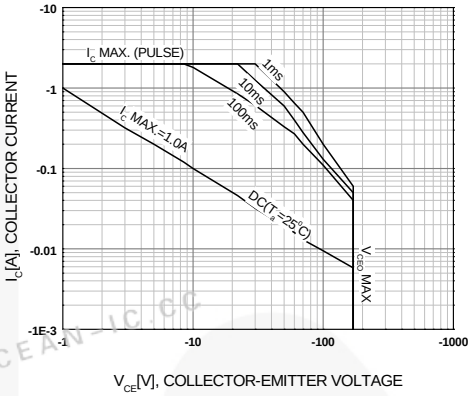
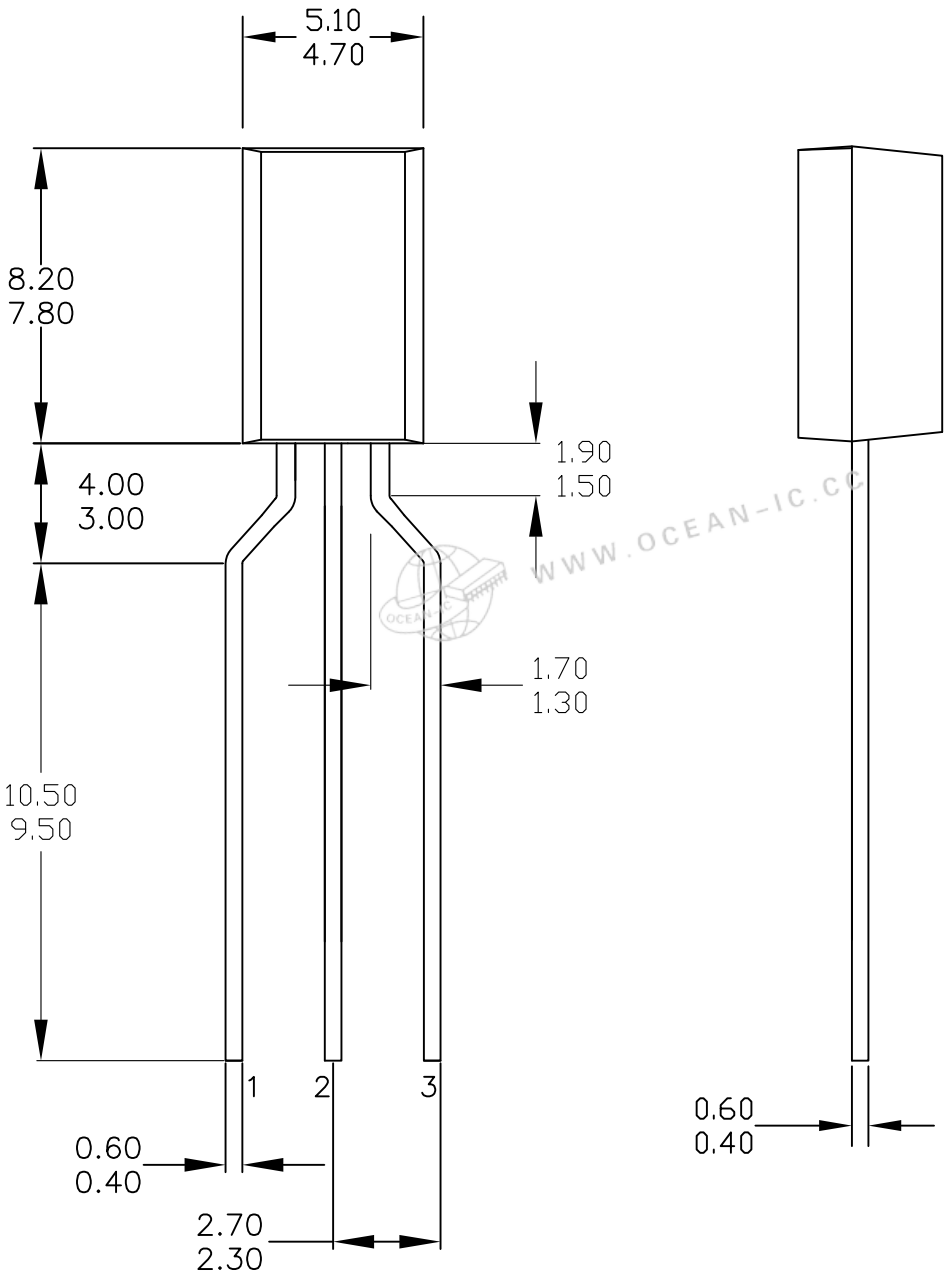
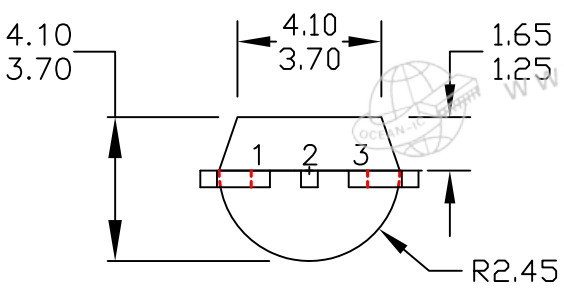


Figure 8. Safe Operating Area





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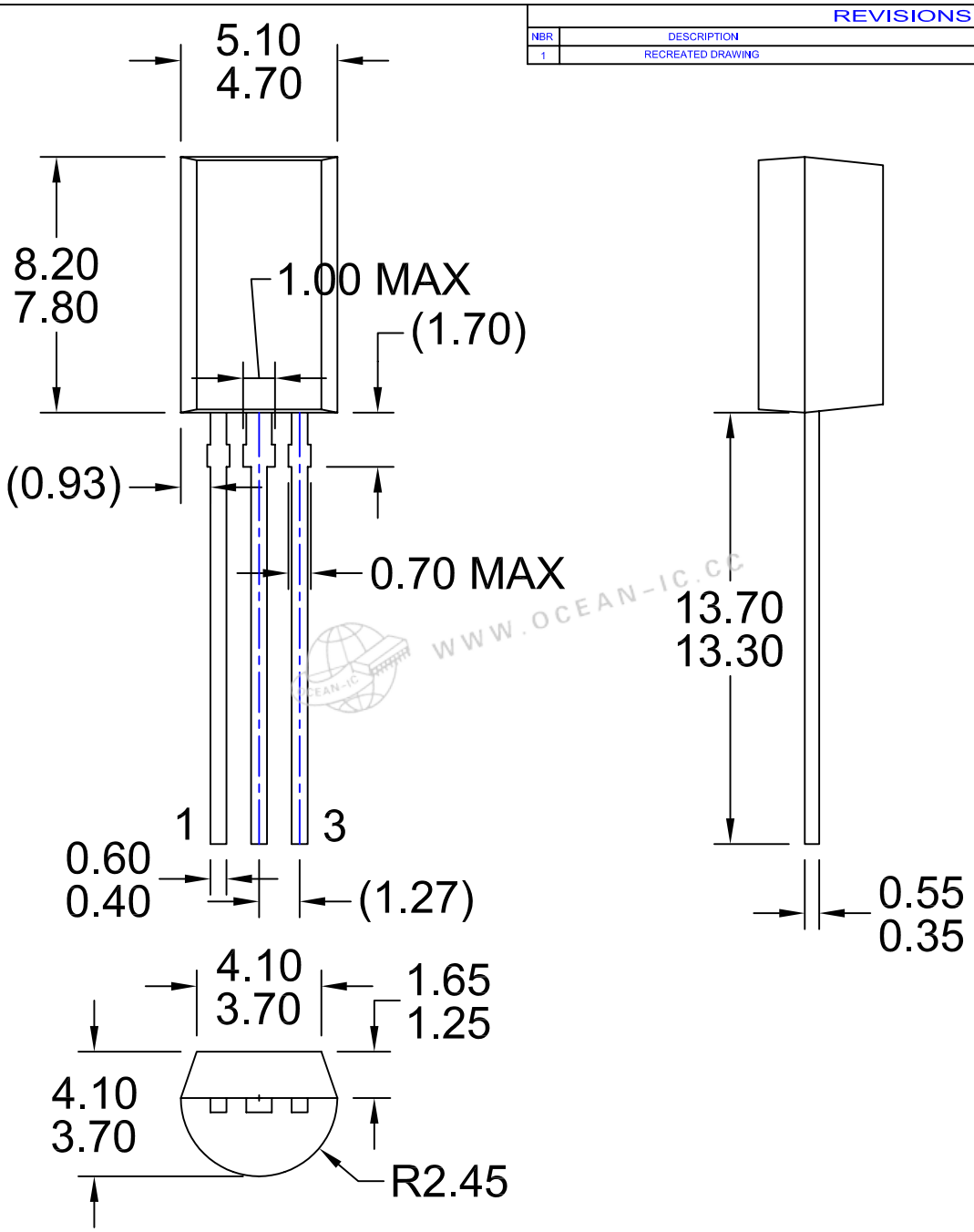
C. ALL DIMENSIONS ARE IN MILLIMETERS.
D. DRAWING FILENAME: MKT–ZA03LREV1.
E. FAIRCHILD SEMICONDUCTOR.

REVISIONS			
NBR	DESCRIPTION	DATE	BY/SITE
1	RECREATED DRAWING	10 JULY 08	L.HUEBENER/FSME



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E) DRAWING FILE NAME: MKT-ZA03HREV1

APPROVALS	DATE
DRAWN: L.HUEBENER	10 JULY 08
CHECKED: H.ALLEN	10 DEC 08
APPROVED:	

FAIRCHILD SEMICONDUCTOR™

3LD, TO92L, 8MM TALL BODY

PROJECTION INCH [MM]

SCALE	SIZE	DRAWING NUMBER	REV
1:1	N/A	MKT-ZA03H	1

FORMERLY: N/A SHEET : 1 OF 1

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
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