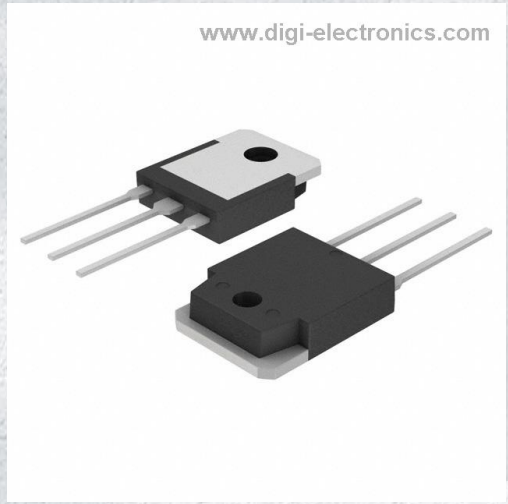
KSC5047TU Datasheet



DiGi Electronics Part Number	KSC5047TU-DG
Manufacturer	onsemi
Manufacturer Product Number	KSC5047TU
Description	TRANS NPN 50V 15A TO3PN
Detailed Description	Bipolar (BJT) Transistor NPN 50 V 15 A 100 W Through Hole TO-3PN

https://www.DiGi-Electronics.com

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Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
KSC5047TU	onsemi
Series:	Product Status:
-	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
NPN	15 A
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
50 V	500mV @ 120mA, 5A
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
100µA (ICBO)	40 @ 5A, 5V
Power - Max:	Frequency - Transition:
100 W	-
Operating Temperature:	Mounting Type:
150°C (TJ)	Through Hole
Package / Case:	Supplier Device Package:
TO-3P-3, SC-65-3	TO-3PN
Base Product Number:	
KSC5047	

Environmental & Export classification

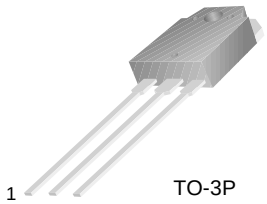
Moisture Sensitivity Level (MSL):	REACH Status:
1 (Unlimited)	REACH Unaffected
ECCN:	HTSUS:
EAR99	8541.29.0095

FAIRCHILD SEMICONDUCTOR®

KSC5047

Feature

- High Current Gain
- Low Collector Emitter Saturation Voltage



TO-3P

1.Base 2.Collector 3.Emitter

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	15	V
I_C	Collector Current	15	A
I_B	Base Current	4	A
P_C	Collector Dissipation (T_C=25°C)	100	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 55 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 50mA, I_B = 0	50			V
I_{CBO}	Collector Cut-off Current	V_{CB} = 100V, I_E = 0			100	μA
I_{EBO}	Emitter-Base Breakdown Voltage	V_{EB} = 15V, I_C= 0			100	μA
h_{FE}	DC Current Gain	V_{CE} = 5V, I_C = 5A	40			
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 5A, I_B = 0.12A			0.5	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = 5A, I_B = 0.12A			1.2	V
t_{ON}	Turn On Time	V_{CC} = 20V, I_C = 5A I_{B1} = - I_{B2} = 0.12A R_L = 4Ω		0.5		μs
t_{STG}	Storage Time			2.5		μs
t_F	Fall Time			0.5		μs

Typical Characteristics

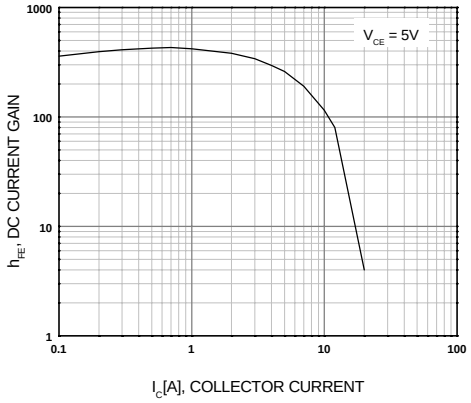


Figure 1. DC current Gain

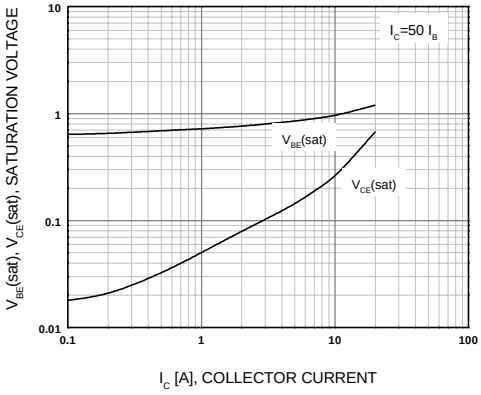


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

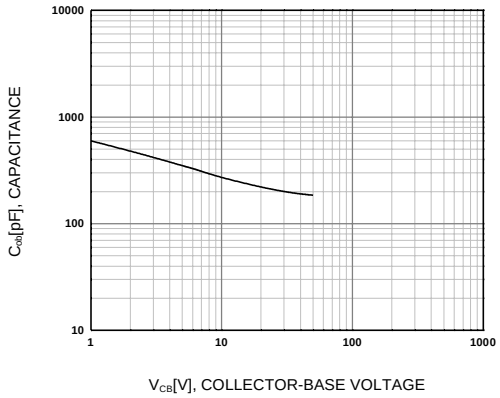


Figure 3. Collector Output Capacitance

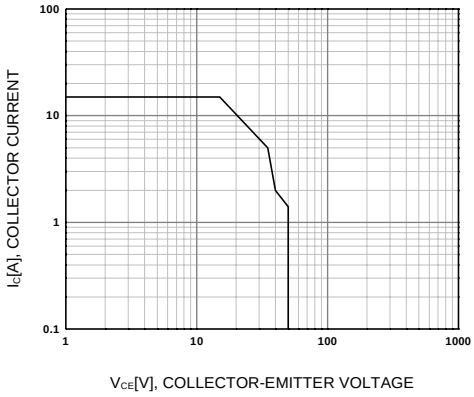


Figure 4. Safe Operating Area

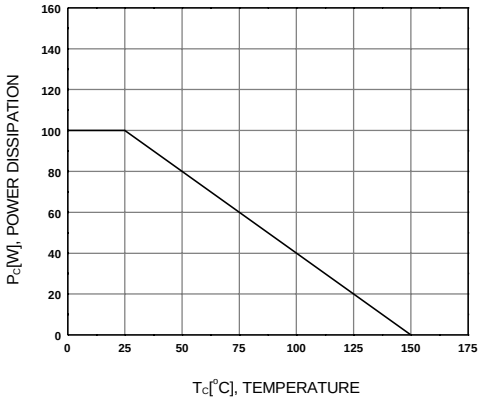
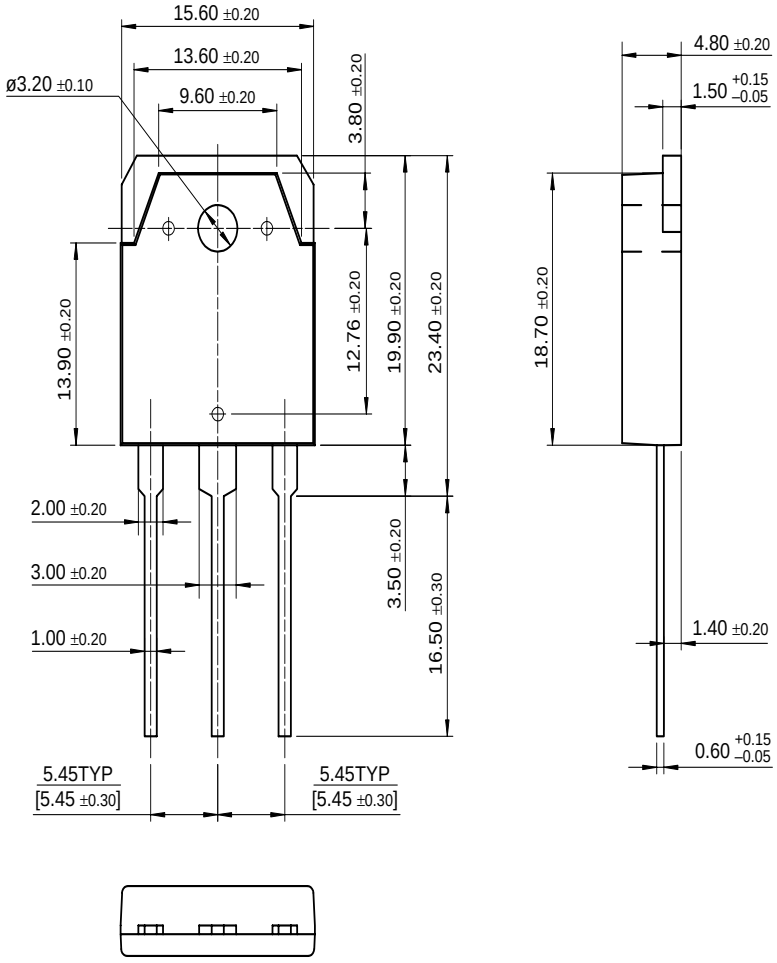


Figure 5. Power Derating

Package Dimensions

TO-3P



Dimensions in Millimeters

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Bottomless™	FAST®	LittleFET™	Power247™	SuperSOT™-3
CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E^2CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I^2C™	OCX™	RapidConfigure™	UHC™
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The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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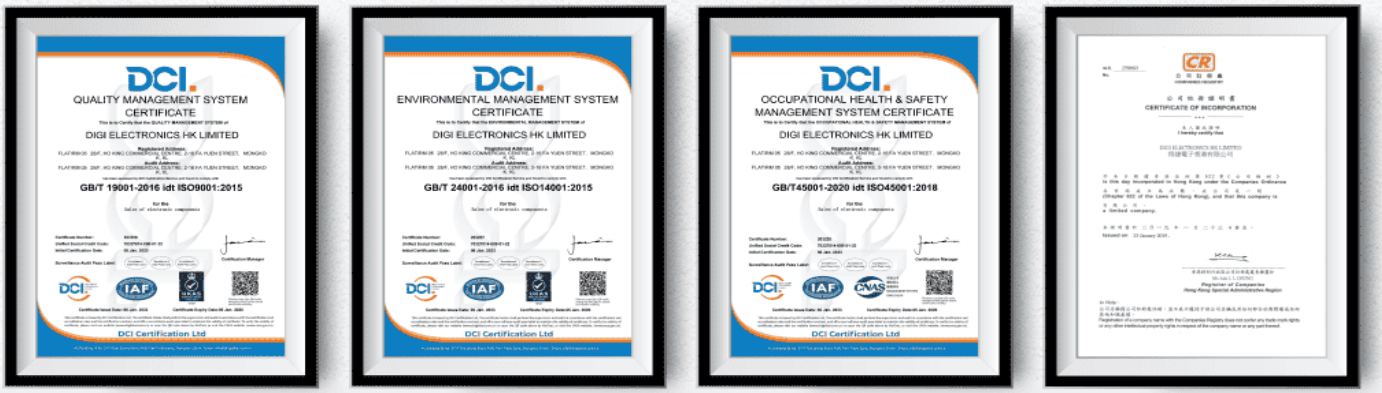

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