

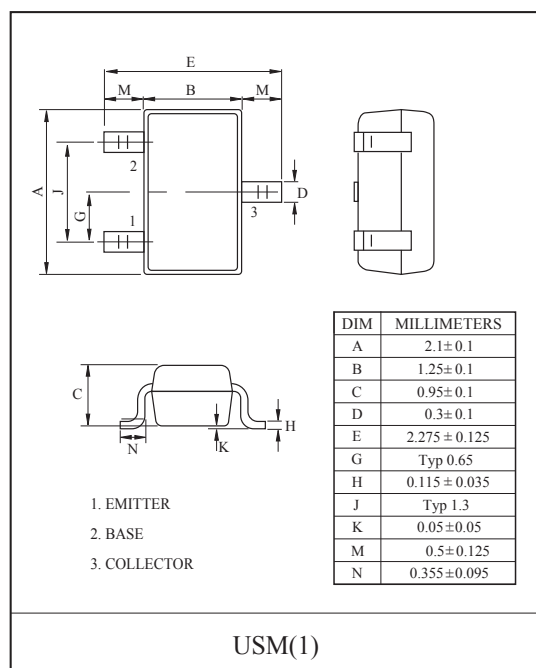
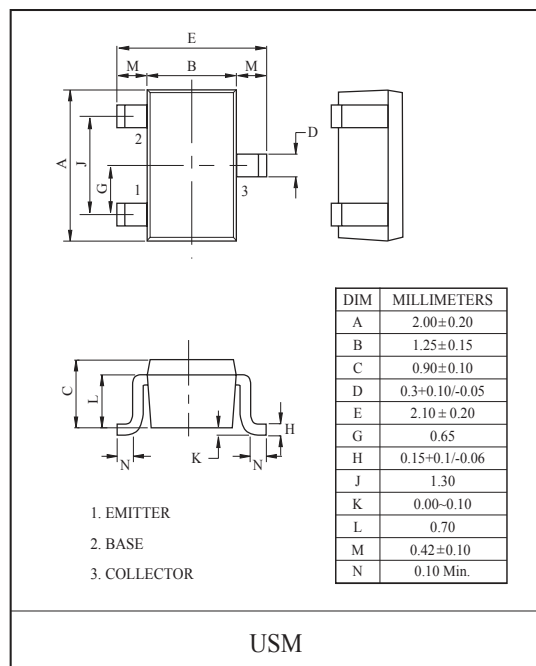
GENERAL PURPOSE APPLICATION.
SWITCHING APPLICATION.

FEATURES

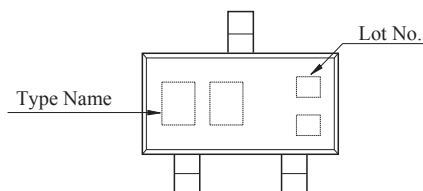
- High Voltage : BC846W $V_{CE0}=65V$.
- For Complementary With PNP Type BC856W/857W/858W.
- Suffix **U** : Qualified to AEC-Q101.
ex) BC847W-B-RTK/**PU**
- Suffix **A** : USM(1) Package.
ex) BC847W-B-RTK/**PA**

MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	BC846W	V_{CBO}	80	V
	BC847W		50	
	BC848W		30	
Collector-Emitter Voltage	BC846W	V_{CEO}	65	V
	BC847W		45	
	BC848W		30	
Emitter-Base Voltage	BC846W	V_{EBO}	6	V
	BC847W		6	
	BC848W		5	
Collector Current		I_C	100	mA
Emitter Current		I_E	-100	mA
Collector Power Dissipation		P_C	100	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55 ~ 150	°C



Marking



MARK SPEC

TYPE	BC846W-A	BC846W-B	BC847W-A	BC847W-B	BC847W-C	BC848W-A	BC848W-B	BC848W-C
MARK	1A	1B	1E	1F	1G	1J	1K	1L

BC846W/7W/8W

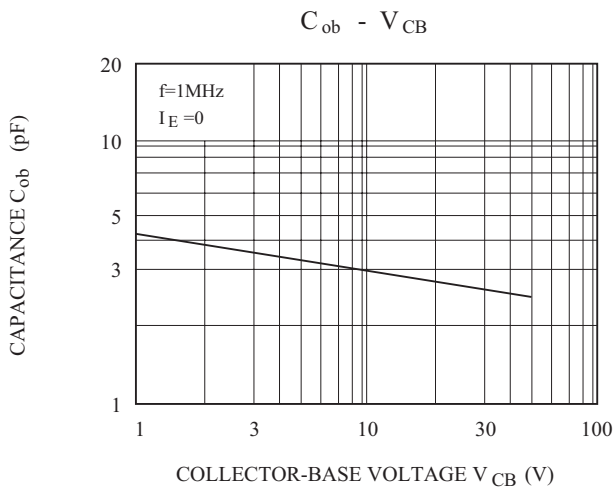
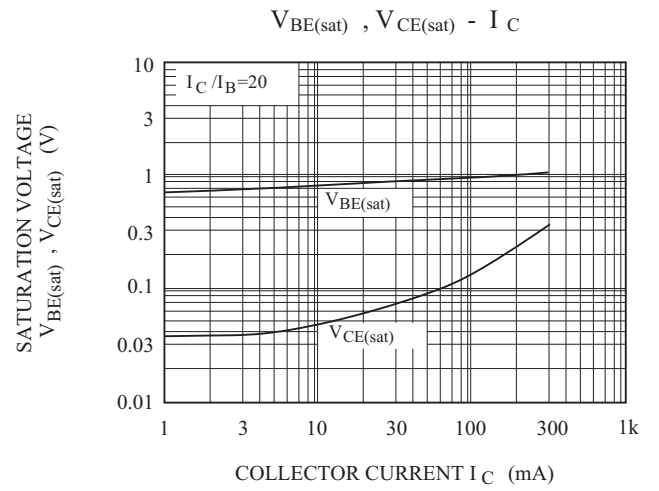
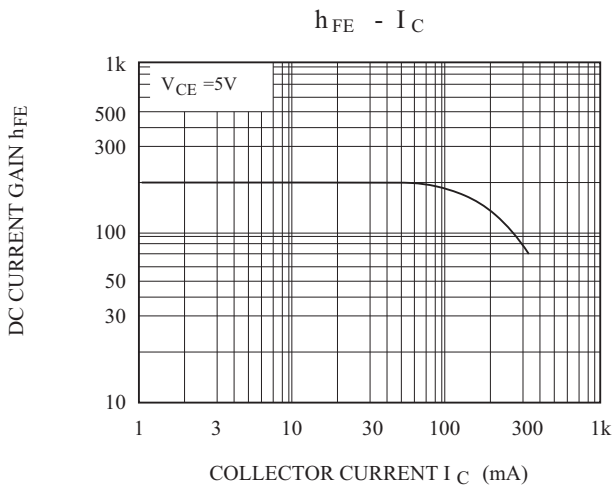
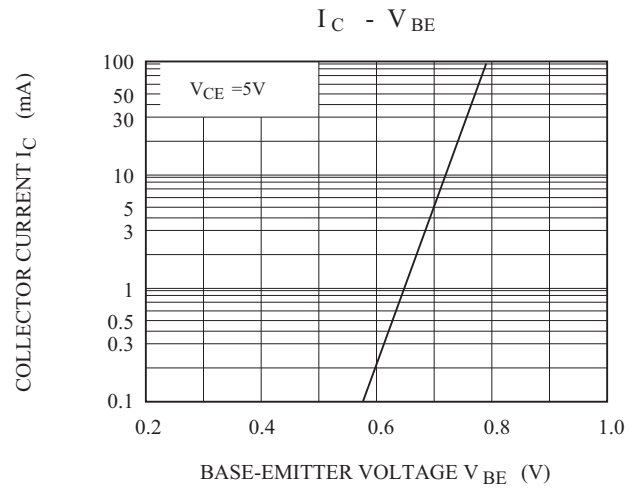
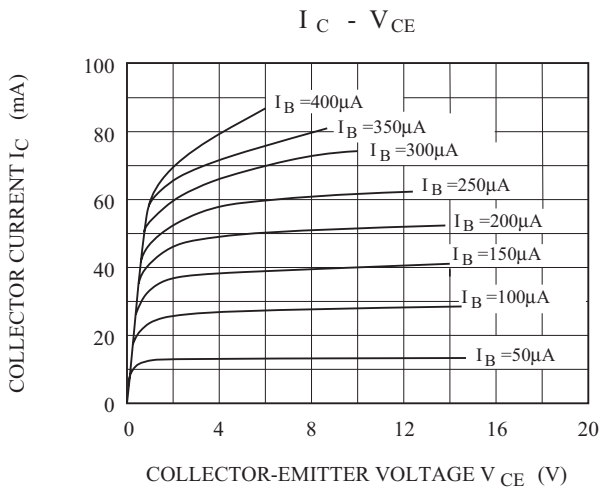
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=30V, I_E=0$	-	-	15	nA
DC Current Gain (Note)	BC846W	h_{FE}	$V_{CE}=5V, I_C=2mA$	110	-	450	
	BC847W			110	-	800	
	BC848W			110	-	800	
Collector-Emitter Saturation Voltage		$V_{CE(sat)} 1$	$I_C=10mA, I_B=0.5mA$	-	0.09	0.25	V
		$V_{CE(sat)} 2$	$I_C=100mA, I_B=5mA$	-	0.2	0.6	
Base-Emitter Saturation Voltage		$V_{BE(sat)} 1$	$I_C=10mA, I_B=0.5mA$	-	0.7	-	V
		$V_{BE(sat)} 2$	$I_C=100mA, I_B=5mA$	-	0.9	-	
Base-Emitter Voltage		$V_{BE(ON)} 1$	$V_{CE}=5V, I_C=2mA$	0.58	-	0.7	V
		$V_{BE(ON)} 2$	$V_{CE}=5V, I_C=10mA$	-	-	0.75	V
Transition Frequency		f_T	$V_{CE}=5V, I_C=10mA, f=100MHz$	-	300	-	MHz
Collector Output Capacitance		C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	-	2.5	4.5	pF
Noise Figure		NF	$V_{CE}=6V, I_C=0.1mA$ $R_g=10k\Omega, f=1kHz$	-	1.0	10	dB

NOTE : According to the value of h_{FE} the BC846W, BC847W, BC848W are classified as follows.

CLASSIFICATION		A	B	C
h_{FE}	BC846W	110 ~ 220	200 ~ 450	-
	BC847W	110 ~ 220	200 ~ 450	420 ~ 800
	BC848W	110 ~ 220	200 ~ 450	420 ~ 800

BC846W/7W/8W



PRECAUTION ON USING KEC PRODUCTS

1. The products described in this data are intended to be used in general-purpose electronic equipment (Office equipment, telecommunication equipment, measuring equipment, home appliances)
2. When you intend to use these products with equipment or device which require an extremely high of reliability and special applications (such as automobile, air travel aerospace, transportation equipment, life support, system and safety devices) in which special quality and reliability and the failure or malfunction of products may directly jeopardize or harm the human body or damage to property and any application other than the standard application intended, please be sure to consult with our sales representative in advance.
3. On designing your application, please use product within the ranges guaranteed by KEC for maximum rating, operating supply voltage range, heat radiation characteristics and other characteristics. User shall be responsible for failure or damage when used beyond the guaranteed ranges.
4. The technical information described in this data is limited to showing representative characteristics and applied circuit examples of the products and it does not constitute the warranting of industrial property, the granting of relative rights, or the granting of any license.
5. What are described in the data may be changed without any prior notice to reflect new technical development. Please confirm that you have received the latest product standards or specification before final design, purchase or use.
6. Although KEC is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors. Therefore, in order to prevent personal injury or fire arising from failure, please take safety measures such as complying with the derating characteristics, implementing redundant and fire prevention designs, and utilizing backups and fail-safe procedures. KEC shall have no responsibility for any damages arising out of the use of our Products beyond the rating specified by KEC.