US5A THRU US5M

5.0AMPHIGH EFFICIENCY RECTIFIERS

FEATURES

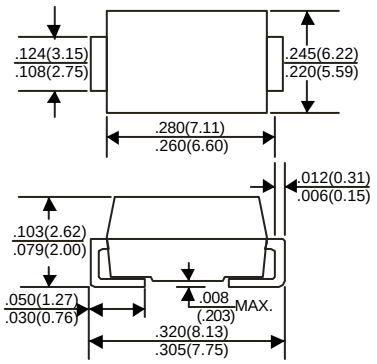
*Idealforsurfacemountapplications
* Easy pickandplace
* Built-instrainrelief
* Highsurgecurrentcapability
* Lead Free Finish/RoHS Compliant

MECHANICAL DATA

* Case: Moldedplastic
*Epoxy:UL94V-0rateflameretardant
* Terminals:Solderplated,solderableper MIL-STD-202F, method208guranteed
*Polarity:Colorbanddenotescathodeend
* Mountingposition:Any
*Weight:0.215grams

VOLTAGE RANGE
50 to 1000Volts
CURRENT
5.0Amperes

DO-214AB(SMC)



Dimensionsininchesand(millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating25°Cambienttemperatureuniessotherwiesspecified.
Singlephasehalfwave,60Hz,resistiveorinductiveload.
Forcapacitiveload,deratecurrentby20%.

TYPENUMBER	US5A	US5B	US5D	US5G	US5J	US5K	US5M	UNITS
MaximumRecurrentPeakReverseVoltage	50	100	200	400	600	800	1000	V
MaximumRMSVoltage	35	70	140	280	420	560	700	V
MaximumDCBlockingVoltage	50	100	200	400	600	800	1000	V
MaximumAverageForwardRectifiedCurrent .375"(9.5mm)LeadLengthatTa=50°C	5.0							A
PeakForwardSurgeCurrent,8.3mssinglehalfsine-wave superimposedonratedload(JEDECmethod)	200							A
MaximumInstantaneousForwardVoltageat5.0A	1.0			1.3	1.70			V
MaximumDCReverseCurrent Ta=25°C	5							µA
atRatedDCBlockingVoltage Ta=100°C	150							µA
MaximumReverseRecoveryTime(Note1)	50				75			nS
TypicalJunctionCapacitance(Note2)	75							pF
OperatingandStorageTemperatureRangeTj,TSTG	-65—+150							°C

NOTES:

1ReverseRecoveryTimetestcondition:IF=0.5A,IR=1.0A,IRR=0.25A

2Measuredat1MHzand appliedreversevoltageof4.0VD.C.

RATING ANDCHARACTERISTICCURVES(US5A THRU US5M)

FIG.1-TYPICALFORWARD CHARACTERISTICS

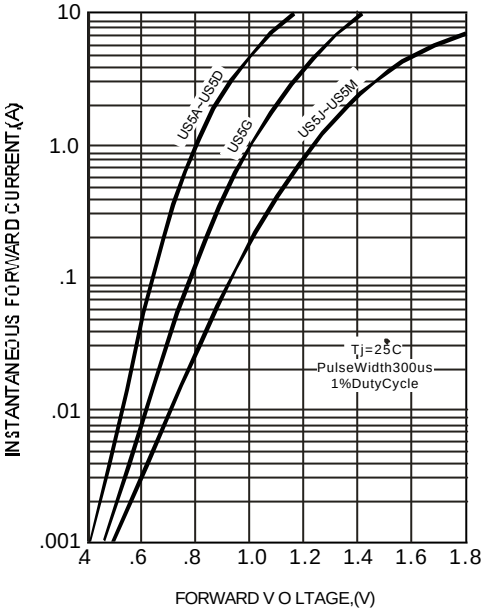


FIG.2-TYPICAL FORWARDCURRENT DERATINGCURVE

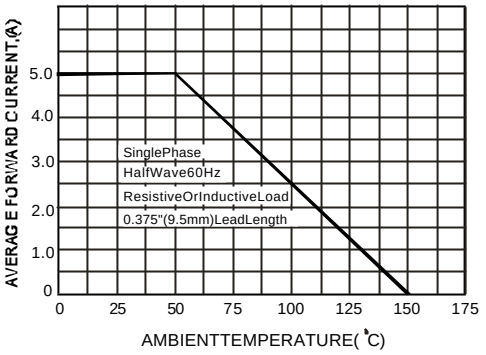
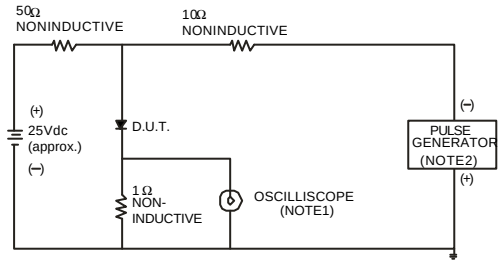
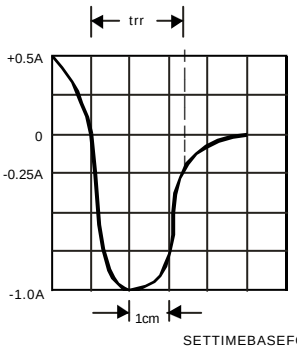


FIG.3-TESTCIRCUITDIAGRAMANDREVERSE RECOVERYTIMECHARACTERISTICS



NOTES:1.RiseTime=7nsmax.,InputImpedance=1megohm.22pF.

2.RiseTime=10nsmax.,SourceImpedance=50ohms.



SETTIMEBASEFOR 50/10ns/cm

FIG.4-MAXIMUMNON-REPETITIVEFORWARD SURGECURRENT

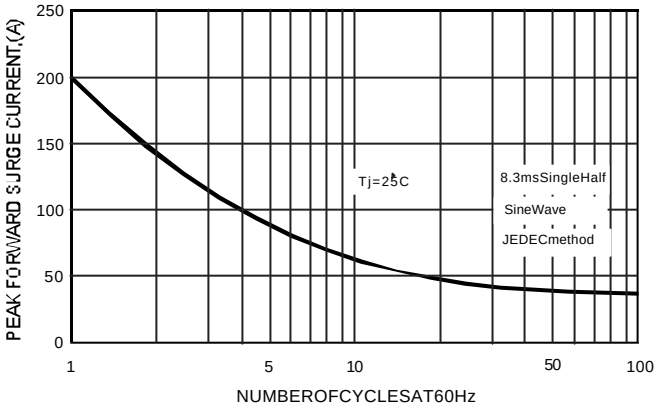


FIG.5-TYPICALJUNCTIONCAPACITANCE