

# 400V/450V IGBTs for Igniter DGU Series

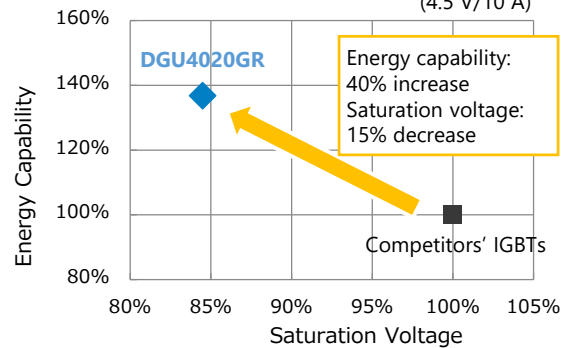
## Description

The DGU series are IGBTs for automotive with protection devices. These IGBTs are suitable for driving ignition coils used in ignition systems for automobiles and motorcycles. The DGU series have built-in diodes and resistors for gate protection, thus requiring no protection devices and fewer components, resulting in the reliability improvement of igniter modules. The DGU4x20GR improves a trade-off between energy capability and saturation voltage, providing safer applications.

## Features

- AEC-Q101 Qualified
- Guaranteed up to  $T_J = 175\text{ }^\circ\text{C}$  (max.)
- High Avalanche Capability
- Bare Lead Frame: Pb-free (RoHS Compliant)
- Low Saturation Voltage
- Built-in Zener Diodes for Gate Protection
- Built-in Gate Resistors
- Improved Trade-off between Energy Capability and Saturation Voltage (DGU4x20GR)

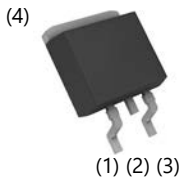
DGU4020GR Energy Capability Comparison  
(4.5 V/10 A)



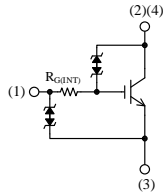
## Selection Guide

### Package

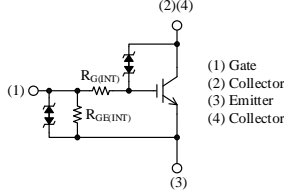
TO252-2L



DGU4015G

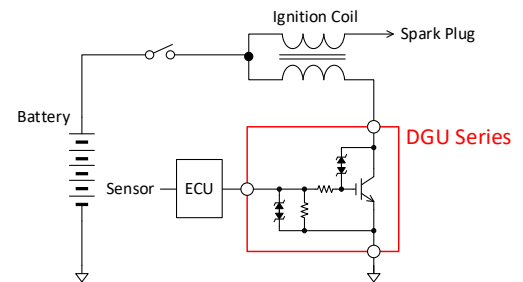


DGU4x20GR



- (1) Gate
- (2) Collector
- (3) Emitter
- (4) Collector

### Typical Ignition Coil Driver Application



Part Number	$V_{(BR)CES}$ (typ.)	$I_C$ (max.)	$P_D$ (typ.)	$V_{CE(SAT)}$ (typ.)	$V_{GE}$ (max.)	$E_{SCIS}$ (max.)	$V_{GE(TH)}$ (typ.)	$R_{G(INT)}$ (typ.)	$R_{GE(INT)}$ (typ.)
DGU4015G	400 V	15 A	60 W	1.4 V	$\pm 10\text{ V}$	150 mJ	1.80 V	70 $\Omega$	—
DGU4020GR*	400 V	20 A	172 W	1.1 V		320 mJ	1.75 V	70 $\Omega$	47 k $\Omega$
DGU4520GR*	450 V	20 A	172 W	1.1 V		300 mJ	1.75 V	70 $\Omega$	47 k $\Omega$

\*AEC-Q101 Qualified